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1847 - 1848.

Midwifery & Diseases of Women.

Preface

These are Notes of the Course of Lectures given by Professor Alex. Simpson during the Winter Session 1877-78

They consist of two portions viz: one of Midwifery Proper, including 80 lectures & given on four days of the week; the other of the Diseases peculiar to Women, including 18 lectures, given on Fridays.

They consist of Tables or Synopses of the Lectures & the Lectures themselves in extenso.

The Synopses are all put between asterisks thus

* 20

Synopsis

* 20

& are so separated from the lectures. They form a continuous series independant of the Lectures, the asterisks being numbered & the numbers follow one to each other thus

* 1 Synopsis

* 2.

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* 2 Synopsis

* 3.

The Lectures are all dated when delivered & also numbered. They all have no to each other, the Tables being interspersed amongst them, just as they come in.
They are ruled so as to clearly indicate the subject, its divisions, & principles points and a lecture at once. Thus

———	indicates	The subject
———	"	The divisions of subject
———	"	The sub-divisions of divisions
———	"	The headings under sub-divisions
———	"	The minor headings
———	"	All the chief points

for instance

Exophoritis
1. Parenchymatous
a. Acute
Symptoms
1. Local
a. Pain

Dr H. Bury
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Winter Session 1874-75

Midwifery Lectures

Lecture 2. Nov. 1st/77

*1

(I) Sources of Diagnosis

(II) Rational Symptoms

1 Local 2 General

(1) Local

(a) Derangement of Uterus itself & its appendages

1. In menstrual secretion
2 " mucous secretion
3 " reproductive power
4 " sensations

(b) Derangement of functions of neighbouring pelvic organs

1 Bladder
2 Rectum
3 Ovaries
4 Muscles

(2) General

Symptoms of derangement of distant organs

1 Nervous system

1st. Motor
2nd Sensory

Special seats of Sympathetic Pains

a one or both mammæ
b under left mamma
c in right hypochondrium
d some dorsal vertebræ
e lumbar region
f abdominal parietes
g extremeties & joints
h Face & head

(2) Circulatory Organs including lungs & blood glands

(3) Digestive & Emunctory organs
do with Stomach Bowels Liver Kidneys

(4) Skin

(5) States of general constitutional derangement
1st. Hectic 2nd. Anæmia
3rd. Cancerous cahexia
4th. Hysteria 5th. Marasmus

(B) Physical Diagnosis

Smell

(1) Hearing
1st. Auscultation
2nd. Percussion

(2) Sight
1st. Unaided
2nd. Aided

1. By means for exploring concealed parts
(a) Vaginal Speculum
(b) Cervical "
(c) Endoscope
(d) Anal Speculum
(e) Rectal "
2. By means for examining products of disease
(a) Microscopical (b) Chemistry
3 Observations

(3) Touch
1st Unaided
(a) of abdomen
(b) per vaginam
1 Condition of entrance
2 " " canal
3 " " uterus
(a) os (b) Cervix (c) Body
4 Conditions of appendages
(c.) per rectum
(d) Combined examination
abdomino vaginal
abdomino rectal
Recto vaginal
Abdomino recto vaginal
2nd Touch Instructed

(1) Dilate increased by use of tents - nature -
Sponge - Tangle &c
Mode of use Caution results
(2) Use of Sound
a Vessel to Uterine
Uterine. History Mode of use

Results.

1 Estate of Cavity

*

Specula.

Vaginal Specula are -
1 Simple tubular as Pregnancy
2 Bivalve as Cusco's

Apply one blade anteriorly & other posteriorly
3 Duckbill - to be passed along posterior wall. Leaves
lots of room in vagina for any operating
Beware of using speculum to a virgin
Warm & oil or hot water & lubricate it
Place patient on left side. Pass finger in vagina & then
pass speculum along between it & the perineum.
Bivalve is very easily introduced along back wall
of vagina - Expose patient as little as possible
Make a complete examination of interior as by Uterine &c.

Lecture 3 Nov. 2nd 1874

*2

* Results

1. State of Cavity
2. Length of Uterus
   (a). Increased
      as in Hypertrophy Tumours &c.
   (b). Diminished
      as in Malformation Impermeability
   (c). Curvature or rest of Structure
   (d). Position of Uterus
   (e). Organic state of Parietes
   (f). Complication of Uterus & other Tumours
      Caution as to use
3. Exploring & Operation needles
   Adoption of previous Anæsthesia

*2

Conical Speculum used for exam. conical canal of uterus.
A pair of long forceps will quite well to
dilate this canal, but Speculum is best.
Rectal Speculum for exam. pseudo-Rectum
Cervical Speculum for dilating cervical canal in exam.
the state of Bladder Urethara &c.
Exam. products of dis-case by microscope & chemical tests.

Measurements – By means of Pelvimeter & Common Tape measure marked in ft. & in on inside & metric on the reverse side. The Pelvim. is marked same.

Touch Watched

1st Abdominal Exam. Place patient on back & thighs bent up to relax abdom. walls. But different positions are used as sitting both up in bed or against a support so as to feel weight of Uterus &c. Let patient be at bed's edge Use both hands & both fingers & palms & make a careful palpation. Have warm hands. Observe thickness, pressure consistency &c of abdom. walls. Localise tumours & pregnant symptoms. Fluctuation & ocpulation. Obs ases of fluid. Position of fluid as tumours & their motions. All this information may be got by use of hands externally.

2nd Vaginal Exam. Hand always use at least the index finger hence begin & its insertion alone, then if possible use two fingers for that enables us to feel & form a better impression of state of parts. Always lubricate the hands. Have P. on left side, at edge of bed & her knees bent up Bring the finger first into contact with the perineum. Always know what you are examining for. Be aware of the Hymen when present. State of the entrance, then the state of vaginal canal as to Protrusion, Lacerations, Defects as fistulæ tumours cysts & foreign bodies (as pessaries cotton tumblers) &c. State exam. condition of Uterus itself. Find the Os Uteri

often best found by patient turning on her back after you have introduced your finger. Notice its patency, size, consistence position direction any change of its form &c Also pass fingers round neck of Uterus & examine thus the state of the roof of vagina also state of uterus itself, viscera & surrounding organs as to size tenderness &c all of which may be discovered by perseverance & careful examination, the fallopian tubes may even be felt.

3rd Rectal Exam. By finger often when vagina blocked (as by tumours) or even occluded (as imperf. hymen). The parts in Cervix Ut. feel much larger through the walls of Rectum. Other fingers of hand may be pushed into Rectum even all the hand by rupturing the Sphincter, which if necessary must only be done under Anaesthesia.

4th Combined Exams. As Rect. & Hyst. Vagnal exam. & Pr on her back. Then we may get Abd. wall between the two hands &c. Also 1 Abdom. Vagnal 2 Abdom. Rectal Rect. Vag & Abdom. Rect. Vagnal are all like modes.

Uterus Sounded

By Sounds, found &c. The canals sometimes not being large enough to admit the finger, as from tumours in uterine pathologies &c, we make them so by dilating them &c. Sounds - Two principal kinds Sponge & Sea Sponge. To make Sponge tent take a small conical sponge, dip in hot water & then while it is hot & cord, let it dry, remove cord & it

retains its form & is ready for use. Before introduction lubricate it with Vaseline, hard to be coated it is easy. When introduced it dilates from the uterine secretions (if not enough throw up some warm water) & expands & opens the canal by gradually introduce larger & larger tents

Sponge Tent Is a sea weed. It contracts into less room than does the same quantity of sponge. It takes less of it to form a sufficiently stiff tent for use. It also swells more in proportion but less rapidly than sponge.

Gentian root has been used for to make tents.

To introduce a Tent. P. on her left side. Use a Vag. Speculum & a long pair of forceps we are instrument there is on purpose but they are easily introduced by the fingers alone. Their use is not without danger from fear of inflamation & therefore must not be used from mere curiosity. Never use them at the menstrual periods, nor in inflamatory states.

Lecture 11. Nov. 5 /74

Use of Uterine Sound. 1st. Uterine Sound passed into bladder ascertain relations of Uterus to other parts at the same time passing finger into Rectum as in Obstruction of Vagina

2nd Uterine Sound for passing through Cervix. Canula into Uterus

Is made of Silver or Copper. Some flexible when required to bend. Point curved & looks towards anterior aspect. It has

[+ complete relaxation of abdominal muscles

+ often use Anesthesia as in great pain & spasm of Uterus & Vagina

about

at the end, & another 2 ½ from fourth rib. stops at 6s
& ascertained & we can then tell the wound end has
entered uterine cavity having passed through canal
Sound is marked by measurements to tell how far it is
passed in Sound used as far back as year 100, but
it was not generally introduced into practice till 1818 by a
French Physician, & first in Britain by Sir J. Simpson
Mode of Use - Said to be dangerous, & once much decried
in some schools, wh. arose from its abuse
& not from its legitimate use. Its use & introduction is
difficult in states where the uterus is bent. Is also sounds
along plane of head to be ext. & then feels bend
of sound in according to direction of uterus - straight in
almost all normal states, backwards in retroversion
& forwards in anteversion &c. Never use any force
for it might do harm in early. Learn state of cavity - if
any contents - length of uterus as in puerperal hypertrophy
inflammatory conditions, elongated conditions of cervix, & in cases
of tumours &c. Sound may be retained & arrested in malformation
stricture, impervious states, uterine insertion. Kind of these
stricture in any part either congenital or acquired - position
uterus & its direction found out & absolute certainty - organic
state of uterus (pain & inflam.) - thickness of uterine walls - pelvic
tumours. Physiological states forbid its use as menstruation pregnancy
(even if slightest suspicion) acute inflammation.
Exploratory & Aspiratory needles - Make use of in cases of tumours
when you want to discover their nature by withdrawing fluid or solid

*2. Signs & Symptoms of Pregnancy.

Rational & Physical

=

Presumptive & Certain

=

In earlier months & in later months

=

1 Maternal & 2 Foetal

I Maternal

1. Various minor Constitutional & Sympathetic Changes

a. In countenance
b. " head
c. " skin
d. " digestive system (morning sickness)
e. " circulatory system
f. " urine

2 Suppression of the menses is the most frequent symptom, but pregnancy may be present & the menses occur nice

Menses may occur often
" " " during whole course
" " " only after conception
Conception may occur even before menses appear
" " " when menses are in abeyance

3 State of Abdomen

a Changes in Skin & umbilicus

4 Changes in the Mammae

Their colour, size, & secretion

& also of mammary signs

5 State of Vagina

Form, texture, secretion, vascularity, colour

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*3

Pregnancy is a purely physiological condition but associated with pathological conditions

Signs of Preg. are 1 Presumptive 2 Probable 3 Certain

Rational - are obtained from mother

Probable - are the foetal & maternal evidence, but maternal is often biassed,

Abdominal Symptoms - a In countenance very variable, they become pallor & thinner, colour changes enlargement of thyroid gland - some have head ache, some dreams, some bluish patches on forehead & pigmentation discolouration of abdomen round umbilicus & passing down to genital. glands. Striae of abdom. from rapid distension of fascicles, important, when in crowds they almost indicate pregnancy, but may occur in young women rapidly fattening. They remain permanent & we may see old striae of one preg. & new striae of new pregnancy.

Morning sickness - commences symptom & begins early & lasts first 2 or 3 months seldom on 4th in

Blood modified. Red corpus fewer, white corpus decreased less albumen & more fibrine. A plethoric condition seems. Left vent. of heart slightly increased Arteries & veins of Abdom. & lower extremities enlarged.

Urine altered. When it stands forms a clear pellicle & after falls like flocculent wool & it was called Hippuric. But urine of non gravid women may do the same as that of men.

Lecture 5 Nov. 6th 1877

*3

6. State of Uterus

a. Cervix — softening shortening

b. Body — Form, size, weight, mobility, texture, secretion, position, relation to other organs.

II Fetal

1st Movements

a. Passive movements of foetus
Ballotement

b. Active movements of foetus
Quickening: date

2nd Auscultation

a. Uterine souffle

b. Foetal heart sounds

c. Other sounds as from Umbilical vessels

Movements of foetus

Differential Diagnosis

1. Hypertrophy of Uterus

2. Hæmato- Pyo- Hydro metra

3. Ovarian Tumours

4. Ovarian Tumours

5. Ascites

6. Phantom Tumours

Distinction between 1st & subsequent pregnancies

a In skin of abdomen

b " Mammæ

c " Uterine Tumour

d " Cervix Uteri

e " Vulva

Female organs of Generation

I. The Ovaries

1 Form

2 Size

3 Situation

4 Appearance

5 Structure

A Zona vasculosa or medullary layer

1 Fibrous process containing larger vessels, nerves lymphatics muscular fibre & connec. tissue

2 Larger ramifications of vessels encroaching on

B Zona Parenchymatosa or Cortical layer

1 Follicleferous ~~Layer~~ Stroma

a Older follicles - deep?

b Younger " - superficial

2 Albuginous Covering

3 Epithelial Covering

If menses stop & morning sickness every probability of conception

A pregnancy may have taken place & still a regular monthly flow takes place & of blood. Some women have been known to only have a monthly discharge during pregnancy, hence we may have a gravid uterus & still a discharge of blood & often for space of 3 months after conception. Again suppression of menses may occur not from conception but from pathological causes who. may be accompanied by symptoms like conception.

Conception has occurred even before the menses have appeared in some cases. Ova being formed before menses occur. Menstruation & irregular can be no guide to use Abuses in observance as in lactation, but conception

may occur even during lactation.

State of Abdomen

Difference between Virgin abdom (clear & white) & a once pregnant abdomen (discolouration striæ wrinkles)

Umbilicus is depressed merely after 2 or 3 months but then gradually projects outwards till at 8 & 9th months it bulges out past line of abdomen.

By actual advance of size of abdomen from date of cessation of menses, it reaches brim of pelvis at 3rd months from 3rd to 6th from brim of pelvis to Umbilicus, 6 to 9th it sinks a little downwards & forwards

Changes of Mamma

Can be early noticed. Gland enlarges after 1st months but from 1st it feels finckly & uneasy, but it gets larger month after month as preg. advances. If cut at it & we feel a real glandular enlargement

Of these N. Nipples - It becomes turgid & puffy & areola widens & darkens & is well marked. Papillæ enlarge. At about 6th a 2nd ring appears of a speckled form, round the areola. The mammary veins becomes more prominent. The skin loose. All are contractility in the tissues of mamma & more excitile. Sometimes as early as 3rd months we may squeeze out a drop or two of ^ These signs are of very high value in secretion.

case of a Primipara

Some of these signs sometimes appear during menstrual when pregnancy is not present

These signs are not all so good in case of Multipara

State of V agina

Os are fistulous, walls softer, is called as free secretion is more vascular & can often feel pulsation in vaginal walls. Colour of mucous membr. becomes of a dark violet or purple hue (But this may occur in any case as tumour press on brim of pelvis)

State of Uterus

Cervix & V agina gradually shorten. At 6th month projects very little into V agina. Pregnant cervix is more soft & incedent instead of being hard & firm.

Body - Fundus hangs a little forwards therefor press finger up in front of cervix & behind bladder. If rel. rounded & expanded, at last it is a large oval body. It gradly increases in size. Its walls differ in texture & tumour when first palpated it feels equally hard all over from uterine contraction, but continuing palpation walls relax & then we can feel contents as foetus, but contractions & relaxations occur. Uterus deviates rather towards the right side. Fundus pushes other organs right & left & before it

II Foetal

1st Its movements.

a Obscure movements in method - natural causes

a Ballotement or movements caused by hands of accoucheur externally. Can feel globe of head, & can move foetal head from one hand to the other. Its breech is often easier felt & moved about. Movement from one side to the other & feel motions of foetus. Or ballotement may be felt per vagina, as by keeping uterus & hand externally & letting it drop on finger in vagina.

b Active motions of foetus. Can often be seen by watching abdomen. Often may be felt if not seen. Quickening — noticeable from being only the mother's consciousness & not from own. Most felt between the 3rd & 4th months when uterus rises out of pelvis and abdominal cavity.

a Uterine souffle is a brisk synchronous heart's action (the expert first said to hear the foetal heart) attributed by some to vessels in the placenta by others to vessels in uterine wall, by others to uterine muscular contractions. Probably from vessels & best heard at side of womb. Some have introduced what is called Vaginal Stethoscopes (both are solid) to hear the sound, but are not much used. They are passed up into Vagina

Lecture 6th Nov. 4th 1777

Foetal heart sound can be heard from 5th month onwards if nothing unusual prevents, as immense collection of fluid. Easiest heard according to position of foetus, best heard through back of foetal thorax, generally left side of umbilicus & 2 or 3 in. below it, but varies according to the lie of cases. Foetal heart sounds shorter sharper & more muffled than adult heart. difference between mother's heart & foetus is usually as 1 to 2 (75 - 130) but varies somewhat. Sometimes heard as early as the 4th mo. Sound of Umbilical C. can be heard when child is in certain positions be heard, as a blowing sound, but it of very little diagnostic sound

Sounds of Foetal Movements - often can be heard as a short rapid jerks against uterine wall

There are other sounds as of fluids &c but not unfrequent

Table of the signs & symptoms of Pregnancy

Symptoms	Period of Pregnancy									
	1	2	3	4	5	6	7	8	9	mo.
Morning sickness	+	+	+	V						
Suppression of menses	+	+	+	+	+	+	+	+	+	
Mammary Areola		V	+	+	+	+	+	+	+	
Enlargement of Abdomen & Foetal movements			V	+	+	+	+	+	+	
Shortening of Cervix				V	+	+	+	+	+	
Ballotment									+	
Uterine Souffle				+	+	+	+	V	V	
Foetal Heart			V	+	+	+	+	+	+	
Dusky line & Vagina				V	+	+	+	+	+	
			V	+	+	+	+	+	+	

Differential Diagnosis

1 Hypertrophy of Uterus - often to be distinguished from pregnancy - Want of pregnant softness of parts Uterus is not expanded as it would be at 2 or 3rd months

2. Hematocele - Simple Hydrometra genl. associated with retention retaining the blood, air or water. Tissue is firm & indurated & walls of vagina are not relaxed &c But if not sure of state allow time to elapse & then will have more signs

3 Fibroid Tumour - Often closely resembles pregnancy Menses perhaps being stopped Shape may be there & other symptoms. Shape is also often vascular bruit, but if tumour has reached up to Umbilicus, if pregnant we should hear foetal heart, but child may be dead then Palpation tells us something from alternate contractions & relaxations of abdom. walls &c. Seldom occurs in case of fibroid T. wh also forms a hard solid mass

4 Ovarian Tumours - often confounded w pregnancy. So also w dropsy. Shape is genl. equally central while preg. tumour deviates to one side. No even any bruit or sound of foetal heart. No act freedom of its movements if not fixed from peritonitis

5 Ascites - Easily diagnosed by percussion when it will sound tympanitic & unlike pregnancy

6 Phantom Tumour Already spoken of. Are anæsthetic

Distinction between Primipara & Multipara

a In skin of Abdomen, - Multip - has striæ, coloured & lined state of abdomen, Laxness of walls wh. are softer. In Primi - Vagina tensed - may be remains of hymen. Os Uteri Ext is round & regular no tears its margin quite perceptible In Multip - margin often torn & always irregular, colour of vulva darker

Female Organs of Generation

External & Internal Organs

External - Mons Veneris - Pro genital fissure - Labia Pudenda - Labia Majora - Perineum - Ala nova Labiae et Nymphae - Clitoris - Urethral - Vaginal Canal Orifice - Hymen Navicularis - 1½ in. from perineum. - Vaginal Canal - Bartholini glands just behind hymen

Lecture 4. Nov. 9th 1774

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Development & Structure of the Follicles & Graafian Vesicles

Contents of Graafian Vesicle

1 Stroma of Ovary

2 Outer membrane of Graafian Vesicle = Tunica Albuginea

3 Inner memb. of Graafian Vesicle = Tunica Propria

4 Membrana Granulosa (Inclosed fluid)

5 Prolegerous disc
6 Membrane of Folli
7 Folli
8 Primeval Vesicle
9 Primeval Ovum

Number of Ova in human Ovary

Changes at Menstrual periods

One or more Graafian vesicles rapidly enlarge

Changes in fluid contents

Rupture of Stigma

Escape of Ovum

Changes after Rupture

Formation of Corpus Luteum

Its cavity - Stellate form

Structure of deposit forming it

Its locality

(a) A Development from the clot (Weidé)

(b) A Development from Membrana granulosa (Wagner Bischoff & Pflüger)

(c) A Thickening of internal membrane (Baer & Valentin)

(d) A Thickening of external membrane (Barry & Owen)

(e) Deposit external to both (Lee & Jones)

(f) Deposit between them (Montgomery - Pattison)

(g) A development of Membrana granulosa & internal Tunic (Kölliker)

(h) A develop. of Membr. Gran. of internal Tunic & of vascular stroma (Schroen, Waldeyer)

Colour in some animals – in woman

Period of its largest size – of its disappearance

6 mons.

Propositions regarding Corpus Luteum

1 Conception never happens without the formation of a Corpus Luteum

2 Their number corresponds to the no. of foetuses in Uteri (exceptions)

3 Is true corpus luteum is never formed without conception?

It may be found in ovaries – animals

its menstrual ovulation

arrests during during pregnancy & lactation

* 5

Peritoneal investments of Uterine organs – Runs in front of Rectum up back wall of Vagina, over Uterus itself – down front of it but not so deeply down as behind passing only down to middle of Uterus – up over Bladder & along parietes

Broad – lies right & left. Attached to posterior surface of peritoneum. About size of 1st joint of thumb almond shaped – lies obliquely in antero posterior direction outer angle looking somewhat backwards not in right bracks.

Appearance – glistening but not so much as the adjacent serous membrance. It has on surface of broad ligament. It is no layer of serous membr. covering it

Structure :- 2 distinct layers viz Medullary & Cortical Layer

A. The Medullary Layer - Zona Vasculosa

(1) The Stroma proper) formed of loose connect. tiss. containg several bundles of unstriped muscular fibres wh. run up all through medullary layer & some trace them even into Cortical Zone. Arteries are tortuous & pass into

B. Zona Parenchymatosa - Layer in wh. ovule is developed

Consists of 3 layers viz. (1) Proper follicle bearing Stroma (having follicles containg developing ova) This is covered by (2) Tunica Albuginea - (only a layer of dense connective tiss fibres & found only in advanced life) 3 Epithelial covering - wh. is true epithelial cells & is generically allied to epithelial covering of the Albugian tubes

Work up growth & development of the Ovules or Graafian Vesicles

The epithelial cells covering the ovary form depressions & form a sort of sac is produced round wh the connect. tiss. Stroma of ovary grows up & gradually cuts off & isolates the follicles. One of the epith. cells stops & gets inside the follicle or rather now inside, fluid forms in & surrounds the epith. cell or ovulum wh contains a nucleolus the ovulum gradly. enlarges. Tunica fibrosa & Tunica propria form - Also Membr. Granulosa Proligerous disc or Ingalune disc. Zona pellucida - Vitellus or yolk contained in both

Germinal vesicle is nucleus of cell viz. is once a simple external epithelial cell - Germinal spot is its nucleolus

Number of Ova - very numerous like a fishes roe. Said by Henlé to be 32,000 ova in each ovary. But different statements have say more than a million graafian follicles. Stroma arises always towards surface. Sometimes a graaf. vesicle may contain 2 ovula

Stage of about 11th a marked development of one of the vesses & becomes larger than rest, crowds its way first then & bulges out on surface, its walls thicken & contents become cloudy & dim & may be reduced. Its walls become so greatly thin that walls give way at point called stigma & the the ovum escapes, a laceration of wall of ovary takes place & blood is poured in & fills up cavity from whence the ovum has escaped & walls & cavity Corpus, stigma closes & inside gets less & less & at last remains as a little cancellous tiss. +

Lecture 8 Nov. 9th. /77

*5 Origin of Oxygen to Corpus Luteum

Many misunderstandings between true & false conceptions

4 The ruptured vesse always contains the elements of a Corpus Luteum - but the development of these elements is contingent on accessory circumstances extrinsic to itself

Supposed uses of Corpus Luteum

(a) To form ovulum

(b) To nourish

(c) To expel

(d) To excatrize ovary

(e) To stroge nutritive energy of ovary

II The albugean tubes

Form - length - situation

Structure - 1 Serous 2 Muscular 3 Mucous coat

Function - Changes during pregnancy.

* 6

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around this nucleus a large yellow body forms viz: The Co
Corpus Luteum wh. becomes larger than even the whole ovary
Its early & stellate form. Various descriptions &
opinions as to its formation see Table * 1. a. b. c. d. e. f. g. In
Simpsons lectures the last opinion he. He consists of 2 Layers
Layers viz 1 2 Middle layer - thick soft
& spongy & containing oil globules & colouring matter, under micros-
cope it appears as a no. of nucleated cells &c. 3

Its colour varies in different animals
Corpus Luteum - Opinions regarding it
Said to be true & false The Conception terms C. L
grows larger & larger till at 2nd month of Uterogestation
& to 6th month it is larger than ovary, afterwards lessens
& gradly disappears after birth of child produced from its ovum
If conception does not take place in ovum expelled C.L.

enlarges till next menses when it shrinks & by next menses it has shrunk to a mere cicatrix
Conception never without Corpus Luteum of course for ovum comes out of it.
As a rule Corpora Lutea correspond in number to the foetuses in the uterus. But may be two or more ova in one ovisac & then there may be only 1 Corpus Luteum to twins or triplets
What is a true Corpus Luteum? If ovum is not fertilized then C.L shrinks away this is a false, but if fertilized C.L grows & continues. A False C.L disappears at the end of two months & remains only as a cicatrix
We may have true C.Ls in virgins
during ~~pregnancy & lactat~~ Ovulation
Arrested during pregnancy & lactation
Use of Corp. Lut. is to fill up cavity of ruptured walls of Ovisac See Table x5

II Of allopian Tubes
Two - right & left - Trumpet shaped & narrow orifice where they opened in Uterus & wide towards ovary.
Wavy course - Slightly curved backs - About 4 in. long left being slightly longest. At free end margins forms the Fimbriae - Lie in upper border of broad ligaments Looks like a simple fibrous cord as seen from above - Canal widens towards its free extremity - These walls are

1 Simple serous coat which is external

2 Muscular Coat 2 layers of fibres running in a longitudinal way & 2 running circularly

3 Mucous Coat lining canal. At free end it is continuous with the external serous membrane hence continuity of serous & mucous membrane there is no layer of connec. tiss. between this & muscular walls. It contains glands & follicles & connec tiss ne corpuscles. Some dispute the presence of glands but they are there & covered by colum. epithl cells. Mucous coat is lined with ciliated columnar epithelium which beats ovula down to uterus. There are cilia on surface of fimbria which as it were fish for & take up the discharged ova in their course

No marked changes during pregnancy only a general sort of enlargement or hypertrophy a slight increase in size & softening of structure.

In woman two ovaries & two tubes

" Rodentia tubes come together towards base

" Ruminantia two unite higher up

" Solipedes two tubes unite near top?
two tubes united all way down?

" Woman complete union of two parts so as to form only one sac.

Ovary is of prime importance in generation, but next organ in importance is the

*b III Uterus

Form - Type

1 Body comprising

a Fundus & Body

2 Cervix comprising

(a) Supra Vaginal portion

(b) Infra Vaginal portion

Situation & Relations

Appearance on Section

Structure.

Walls

Serous (perimetrium)
Muscular (myometrium)
Mucous (endometrium)

1st - In body

2nd - In cervix

Vessels nerves Lymphatics *4

Uterus Shape - like a pear but flattened from before backwards flattening not equal more pronounced in anterior surf Three borders 1 Fundus & 2 Lateral right & left meeting at the angles - Two surfaces of Fallop. Tubes at angles. Surface of Os Uteri Uterus is about 3 in length Breadth at base 2 in Ant. post diameter 1 in - in thickness. Divided by a de.

[illegible] into upper portion. The Uterus proper or Body of Uterus & lower part of each is Cervix Uteri also divided into Supra V aginal portion & Infra V aginal portion. These divisions important pathologycally & physiologically. In 4th month foetus & upto age of 12 yrs, neck is the largest part & not till period of puberty does body become larger than neck

Axes of Uterus is in line from Umbilicus to tip of Coccyx. It lies a little to right of middle line & is a little twisted from the direct transverse direction. Held in situ by broad ligaments round ligaments & folds of fascia

Lecture 4 Nov. 12th

* 4 Menstruation

Ancient theories of Menstruation

1 Plethora

2 Elimination of Nervous materials

3 An unnatural occurrence

Modern theory

Phenomena

a By menses

Affecting system through Sympathetic Ganglia

e.g. Stomach Heart &c.

B. Local

a In Ovary

b " Fallopian Tube

c " Uterus

Three Stages

1 Invasion

2 Persistence

3 Desquamation

1 Chemical Composition

2 Quantity

3 Duration of Flow

In 253 cases duration steady

93.285 Per cent

Variable 6.715 Per cent

Of the steady cases 26.695 menstruated eight days

20.462 " three "

11.949 " four "

11.864 " five "

In 1.972 duration steady 92.185 P.C

unsteady 7.815 P.C

26.024 P.C. menstruated 8 days

18.252 P.C " 4 "

16.094 P.C " 3 "

16.072 P.C " 5 "

It Frequency of the flow
menstrual types
Periodicity types

In 550 cases . 481 in wh. type is regular

28 days in 70.89+ P. Cent
30 " " 13.4+3 "
21 " " 1.663 "
24 " " 1.445 "

* 8

– Uterus (Continued

Uterus – hollow organ. Os Internus – Os External

Its Cavity – triangular c base above, sides rather longer than base. Cervical canal is fusiform or spindle shaped

It has 3 coats viz:

1 Serous – from general peritoneal investment & known as the perimetrium. It does not entirely cover it

2 Muscular – Striped fibres wh. are in direct contact with the serous coat. Called the mesometrium

3 Mucous – Structure like other mucous membs. except that it has no areolar tissue between it & the muscular coat from which it is almost inseparable. Surface has red (dark) glistening aspect. Microscopic specs scattered all over it covered c cylindrical epithelial ciliated cells. Connec. tiss. c. granular matrix c numerous minute follicles imbedded in it

Uterine tubes – are cylindrical & blind at inner extremity which sometimes ends in 1, 2 or more sacs. They run in a somewhat tortuous course. They form not a sort of mucous secretion.

The mucous membrane of tubes is thrown into longitudinal folds on ant. & post. walls & which are met by transverse folds. Cells ciliated. Uterine glands are not present and tubes secretions are alkaline in character. At one part of tubes there is only common flattened epithelial cells. It is during or rather about menstruation it is folded so.

After childbirth once taken place uterus remains more rounded Uterus loses its triangular form somewhat & base becomes somewhat arched

Arteries & Veins numerous in Uterus it being very well supplied indeed. Uterine Uterine Artery is a branch of the hypogastric, a branch from Uterine. Uterine. Branch from hypogastric runs along Uterine tubes. They are very tortuous in their course. They form a complete network. Veins correspond with the arteries. They have no muscular or cellular coat

Lymphatics – Numerous. Lymph spaces gradually form into canals. Tend towards Uterine & Lumbar Glands

Nerves – All arise from Sympathetic System. Two Spermatic & Angina – Great Uterine Plexus also main supply from Cervical Ganglion of Uterus

Menstruation

Occurs at variable age to which ages the mortality of boys & girls equal. But from 14 - 15 100 boys to 128 girls. This from changes then taking place in girls. Menstruation is used for calculating child births.

Ancient Theories Aristotle & Hippocrates ideas

1 - Thought to be due to a Plethora, the surplus being expelled to eliminate it from system

2 Thought to eliminate noxious materials how accumulated not explained. Women in this state thought to influence things as blighting plants if they approached them. Turning milk sour. Stopping the formation of butter Turning fresh meat putrid &c other nonsense regarded as unclean. From irregularities of civilized women. By evolution of blood from upright position &c other nonsense. Also regarded as unnatural

Modern Theory - Accompaniments of ripening & bursting of a Graafian Vesicle

Phenomena - Periodic painful irritation of mamma

1. Local & pain & weight & heat among uterine organs

2. Local - In Ovary from bursting of Vesicle

In Fallopian Tubes becomes raged. Tube's mouth turns in direction of ovum

In Uterus - Arteries carry a richer supply of blood Body & Cervix become swollen & congested. Changes

Uterine mucous membrane, cells slip & thickens folds up it easily & is hence for want of room thrown into folds. Its cells are multiplied & enlarged. It becomes much more vascular. Mouths of follicles become larger & more prominent. All this goes on before actual flow then some of capills. break down & there is a scaling off of some of the epithelial surface & the underlying surface flow occurs in Body of Uterus, not much change in Cervix only thickening. Repair takes place in a few days & goes on from below upwards.

Three Stages

1. Increased - Increased mucous secretion. Weight & increase of parts. Mucous may be now just tinged with blood. It has a peculiar odour just at this time of invasion. Then discharge becomes bloody. The blood mixed with mucous, epithelial cells & granular cells from uterine follicles. Fullness of Pelvis. Enlargement of uterus may be felt & it is more rigid

2. Persistence - lasts from three to 5 days

3. Cessation - Blood darker & more mucous globules & cells. Blood becomes less dark & contains fewer blood corps. till blood ceases to flow.

Blood - fluid & shows no tendency to coagulation, from mixture of mucous, which is alkaline. But where mucous

is absent, or below in too large quantity it may fail to coagulate from want of mucous.

Quantity - from two to 10 or 12 oz. In many nations (diapers) will give us a datum as to quantity reckoning 1 oz to each napkin.

Average may be about 5 ozs? It varies in different cases but in all women it settles down to a regular average flow. Climate & other influences of like character have little effect on it.

Lecture 10 Nov. 13th/77

*8 Age at which the menstruation begins

Table of 1st appearance in women of warm climates

Age	Calcutta	Deccan	Madras	Bombay	Bengal	Asia	Total each age	Negro race
8	3	-	3	-	3	9	4	-
9	7	-	13	-	9	24		-
10	14	2	18	-	19	53		-
11	34	34	78	5	86	240		1
12	66	39	134	14	148	407		5
13	149	54	123	17	135	381		10
14	111	35	84	-	96	259		16
15	111	22	40	-	54	122		15
16	6	9	22	-	25	62		17
17	3	10	14	-	16	43		12
18	1	3	3	-	3	10		1
19	-	3	3	-	3	9		1
20	1	-	1	-	2	4		-
21	-	2	2	-	1	5		-
22	-	-	-	-	1	1		-
23	-	1	1	-	1	3		-
	139	204	540	39	606	1635		89

Influence of Race

In Hungary Commencement of Menses

Slavs between	16 - 17 yrs	
Magyars "	15 - 16 yrs	
Jews "	14 - 15 yrs	
Negresses "	13 - 14 yrs.	

Influence of Social Condition

Medium period of commencement 15.49 yrs.

Women from higher & middle ranks 14.498 yrs

Poor women 16.0 yrs

b - Age at which it ceases - menopause

It ceased from 36 - 40 yrs. in	272 cases	=	11.84 P.c.
41 - 45	595	=	25.97 P.c.
46 - 50	940	=	41.03 P.c.
51 - 55	334	=	14.58 P.c.
Before 35 & after 55 in	150	=	6.54 P.c.
Total	2291	=	99.99 P.c.

4. Period during which menstruation goes on

Analysis of Menstrual Discharge

Water	82300	Fatty	390
Globules	6440	Saline	1200
Albumen	480	Mucous	4500
Extractive matters	110	Total	100000

Changes after Menopause

Boas Pathogenesis Uber Menstruation

Changes in Uterus in connection with Pregnancy

1st In its form

Changes from pear form to ovoid

2nd In its position

Becomes abdominal organ generally lateral

Pathological effects from Change of Position & Size upon

1 Bladder ..... Dysuria

2 Rectum ..... Constipation - Diarrhoea

3 Nerves ..... Neuralgia - Paralysis

4 Pelvic Vessels ..... Oedema - Varix

5 Intestinal Canal ..... Dyspepsia

6 Diaphragm ..... Asthma - Palpitation

7 Abdominal Parietes ..... Cracks - Rheumatism

* 9

Period of Flow - Steady in some women but variable in others, but steady in 93 P. C. Varies see the table Greatest number 8 days next 3 days, 4 days & 5 days. Less than 2 days very rare, & more than nine usually some morbid state. 4 or 5 days average

Period between flows - epochs &c. - Comes on in cycles & their difference form their types. Regular in 481 out of 550 cases. 28 day type is by far most frequent. But may be 30 - 21 or 27 days. Average is 28 days from day on which it first commenced last menses. 28 day type occurs in about 40 P. Cent

88 P. Cent

Age of Commencement - Varies - Average 15 yrs. Is affect by

1 Climate - Young in hot countries

Colder the climate later its appearance

In Temperate - Of 9 girls commencing ages are 14 . 15 & 16 yrs when number diminishes after. And our English women average about the same figures. It varies however from 8 - 22 years.

In Hot Climates - Most start at 12th year But varies principally from 11 - 14 yrs.

In Cold Climates - Some as early as 8 & 9 yrs. only 5 at 11 yrs out of 1700 cases at 14 only 143 But greatest number being from 15 to 20 yrs but common as late as 22 yrs. But largest number start at 16 yrs

2 Race - Causes variations (See Tables)

3 Social Condition - See Table. Is earlier in the rich

4 Menstruation ceases - Great variation as to age & far wider ranges than periods of start. Menstruance generally from 40 - 50th yr. (See Table)

Largest number cease between 46 & 50th & some are as early as 35th yr others as late as 55th. Half between 45 & 50 1/4 between 40 & 45

Those who begin menstruation late in life cease far earlier than those who start early.

Changes occur in sexual organs at this period resp:

Ovaries – become condensed & help contain few follicles & those cannot deliver. They shrivel hardens & wither away.

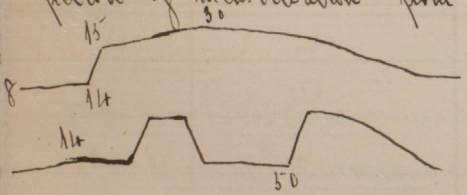
Fallopian tubes – Become blocked & closed up

Uterus – Lessens. Walls thin. Orifices close. Cervix becomes less & often obstructed & occluded almost. Its structure also alters somewhat

Mammae – become fatty – abdomen flattens & rounds off hair often appears on cheeks & they assume a sort of manly appearance & more resemble men.

It may disappear gradually or quite suddenly (the menses)

Amount of CO_2 exhaled by women after this change becomes far less. Greatest quantity exhaled during period of menstruation from 15th to 50th



line in male
line in female
} showing relative amount of CO_2 exhaled

One English woman is equal to 4 or 5 African women for child bearing because their menstrual period is so short.

21 yrs is about the proper marriageable age, for not before then is a woman perfectly developed both physically & mentally. Child bearing is also safer after age of 21 years. Conception may take place any time dur-

ing period of menstruation
Probably the fertilized ovum is not the one that escaped when the last menstrual time was, but the one that escapes with the menstruation at the time

Lecture 11 Nov. 14th 1877

*9 Changes in Uterus (continued)

3 In its absolute volume + dimensions

Annual rate of increase of Abdominal Tumour

Do the uterine walls alter in thickness?

Relative size of Uterus at Various Periods

State of Uterus	Vertical Diam	Transverse Diam.	Anteroposterior Diam
Virgin	3	2	1
3rd month	3½	3½	3½
4th "	4	4	4
6th	8½	6¼	6¾
9th	13	9¼	8¾

4 Changes in its Structure

1st Peritoneum

2nd Muscular middle coat

Its composition

1 Physical Structure

(a) Smooth muscular fibres

(b) Round or oval nuclei

(c) Amorphous or homogenous connective tissue

(d) Fenestrated Connective tissue

(e) Elastic fibrous tissue - small quantity

2 Physiological Structure

Arrangement of Muscular Fibres

(a) External or Sub Peritoneal

(b) Internal muscular layer

(c) Middle Layer

Increase in size of — Arteries

" " " " — Veins or sinuses

" " " " — Lymphatics

" " " " — Nerves

5 Changes in Cervix

Apparent Shortening

& explanations

Indications of date of gestation

6 Changes in its internal surface

Appearance of Membrana decidua

of Uterus

Nomenclature

Evidence of Uterine Origin

*16

Changes in Uterus during pregnancy

1st In its form

Pyriform before conception, at close of pregnancy it is ovoid or egg shaped & broad end up. Up to 2 & 3rd it retains a somewhat pyriform shape fundus being more rounded. From 3rd to 6th body is nearly round From 6th to 9th ovoid. Changes of form occur according to position of woman most marked in multiparous women.

2nd In its position

First 2 months - it sinks slightly from gravity. 3rd month - it begins to rise. 4th month - it has become abdominal. It remains in contact to the abdominal wall except where a distended bladder goes between a little. It deviates a little to one or other side of median line. Rt to right & Lft to left. Some say due to sigmoid flexure, others that it depends on position of placenta, others position in which patient lies in bed on right or left side, others to curvature of spinal column, others to which arm is used most. It gradually rotates on its axis so that ant. aspect of uterus looks somewhat to right. It is sub umbilical and position up to 6th month.

Pathological Effects

Pressure on Bladder ——— Dysuria
" " Rectum ——— Constipation - Diarrhoea
" " Nerves ——— Neuralgia - Paralysis

Blood Vessels _____ Oedema Varix
Intestinal Canal _____ Dyspepsia
Dyspnoea _____ Asthma Palpitation
Abdominal Varicles _____ Cracks Pleurodynia

3rd. In its absolute volume & dimensions

(3 m) Lengthens to 13 inches That is body of uterus does
(2 m) Widens to 9 inches
(1 m) Enters posterior to 8 inches

Capacity - Cones to contain between 300 & 400 cub. inches

Do walls of Uterus thicken?

Some say they grow thinner. Others that they thicken
Walls of unimpregnated uterus = 1/2 in. During progress
of gestation - slight increase in thickness upto 5th month
& after this there is no thinning of walls. About 1/2 in
thick at 9th month still. It retains its 1/2 in. thickness

Relative size of Uterus at various periods (See Table)

At 1st month 1/2 inches in all directions

4th. In its Structure

1st. Of enlargement - grows, thickens & relaxes as it
is pushed upl by enlarging uterus
Partly from unfolding of peritoneum which
lies over its sides. Sometimes it
splits & forms fissures

2nd. Of older Muscular coat - Composition of unstriped
contractile fusiform fibres

1 Physical Structure

(a) smooth non-striped fibres

(b) Round or oval nuclei

(c) Amorphous or homogenous connective tissue

(d) Fibrillated connective tissue

(e) Elastic fibrous tissue in small quantity

These fibres grow numerously both in breadth & thickness if there be any foreign body or worms respect. when contains mu

2 Physiological Action

Arrangement of fibres

In two layers as in Fallopian tubes, but in Worms they form three layers viz:

(a) External or Sub Peritoneal – run somewhat longitudinally up the back over top of fundus & then spreads towards transversely to Fallopian tubes. Some fibres are transverse All cervix fibres are transverse.

(b) Internal Layer – Two sets run in a somewhat circular direction & form a sort of figure 8 Round internal os then form a sphincter

(c) Middle Layer – is more complicated & irregular some run into Ext. & others into Internal layers

Increase of size of Arteries – which enlarge in calibre & become even more tortuous than before

Veins enlarge so as even to form sinuses

Lymphatics enlarge & form lymph spaces

Ovaries - Great discussion as to whether they grow or not
some say it is only in Ovarian tumour
Question as to whether new ganglia form?

5 Changes in Cervix

Shortens during 6th month
Once thought that canal gradly. opened from above
downwards till neck was taken up by the
widening but this is not so.
A change of texture (softer) takes place
Ext. lip becomes a little flattened out

Lecture 12th Nov 15th 1877

*16 Uterus Openings

Ovarian - Hypertrophy of Bruschel
Origin & nature of Decidua
a Seminal fluid
b Effused blood
c Secreted coagulable lymph
d New membrane developed from the mucosa
e Hypertrophied Mucous Membrane of Uterus

Decidua Vera
Decidua Reflexa - Its formation
Decidua Serotina

Contents of Gravid Uterus

A. Membranes lining the Uterus
1 Decidua 2 Chorion 3 Amnion

B. Two vesicles belonging to Embryo
1 Umbilical 2 Allantoid

C. Parts organically attaching foetus to mother
1 Placenta 2 Umbilical Cord

D. Embryo & foetus surrounded by Liquor Amnii

I Membranes
1 Decidua Vera 2 Decidua Reflexa
Synonymes - formed by uterus - at first a closed sac
2 Chorion - first proper foetal membrane
Vascularity

Surfaces -
External smooth External villous
Villi - anatomical nature
Transformation of part of Chorion into Placenta
Hydatidegerous round from which permanenced.

Amnion nearest foetus
Period of its appearance - Origin
At first closely applied to foetus
Physical & Anatomical Characters
Vascular? Relation to Chorion
Corpus Reticule of Wharton
Liquor Amnii

II Varieties of early Ovum

1 Umbilical Vesicle

(Allantois Wharton's Duct)

Origin - Identity with yolk - Size - Vitelline duct

Point of connection with intestines Amphibia

Mammalia Aves

Observations of Balfour

Position of vesicle between Chorion & Amnion

2 Allantoid Vesicle (Metazoa Birds Lacerta)

Origin & nature Vascularity

Relation to Chorion

*11

b Changes in External surface of Ovum

Decidual Membrane - Ovum said developed from seminal fluid, Ovum from blood, Corpus, Ovum as from a new membrane but it is from the Hypertrophied Mucous Membr. of Uterus. During menstruation this mucous membr gets swollen up & folded in the confined space in which it lies. Surface of Mucous Membr at this time is not only thus swollen but has ridges & also pits or depressions which are the orifices of the uterine follicles. The ovum gets caught & lodged in one of these folds & there embeds itself most frequently high up in uterine cavity. Then the Mucous Membr instead of being shed off as usual, it undergoes rapid alteration so that ovum, if aborted, takes with it a sac

wh is thrown off from uterus. Ext. surface of sac is rugged & rough. It has 3 orifices, corresponding to the 2 Uteri Internus & 2 Fallopian tubes. This sac is called the Decidua. It is from ¼ to 1½ lines thick, up to 3rd month but different statements after 3rd month it undergoes a mechanical distension & not a proper vital development. Rough surface is deep surface of uterine mucous membrane which is separated off.

Decidua V. Vera vascular upto 3rd month.

In deeper layers spindle & stellate shaped cells true & nuclei, this is glandular layer

Ext. surface, a more epithelial layer

It has attained its highest development at 3rd month

At 5th month inner surface becomes paler & outer surface smoother, follicular orifices open much wider & most at margins. Membrane gets less vascular & gets perfectly separable from subjacent layer. Separating part is not whole thickness of Uterine Mucous Membrane, varies no depth, but at least the deep ends of follicles are left in uterine wall. This is called the Decidua Vera

Decidua Reflexa - Is another capsular investment of ovum. Thinner closely investing ovum than Vera Supposed to be formed by ovum pushing the Vera before it so as to form a double sac round it. That this

is not so. But this is how it gets its name. If ovum be fixed by
. ovum begins to push into D. V. and [illegible] then
of ova grad[illegible]. grows from side up round about
it & is like the growth of granulations, which
extend & grow up round it, so as to meet at
a point called thro' umbilicus & then forms a
complete investing capsule, the D. reflexa Reflexa. Its
structure is like the V. ova. Smooth on its external
surface. There is at 1st. month a quantity of mucus
between the layers of V. ova & Reflexa, but their
walls gradually near each other till by 3rd. month they
form only 1 membrane & from 3rd - month on this
membrane gradually gets thinned & pushed out
by D. vera. The last formed portion of decidua
Originally thought that it formed
between the ovum & the wall of uterus but
then it was thought ovum came down outside
D. V. But this is not so. It is that part
from which the placenta grows. V. ova greatly
so extend & determines more of placenta
It separates from wall of uterus at internal
It receives the villi wh. grow on outer surface of Chorion.
some suppose that these villi embed themselves in the
follicles. but such does not really take place. The
villi are also larger than follicles & there is not an expand-

of the follicles. The villi embed themselves in the mucous membrane

Contents of Gravid Uterus

3 Membranes 2 Vesicles &c. viz.

1. Decidua 2. Chorion 3. Amnion
1. Umbilical 2. Allantoid Vesicles
1. Placenta 2. Umbilical Cord
1. Fœtus Amnion & Embryo of fœtus

Lecture 13 Nov. 19th 1774

*11.

b. Organs by which fœtus is attached to its mother

a. Umbilical Cord Always present?

Its organ Thickness Length

Places of attachment

1 To Placenta 1 To Fœtus

Its component or later membranes

1 Two umbilical arteries
1 One " vein
3 Cellular Substance gelatin of Wharton
4 External serous covering
5 et areæ
6 Lymphatics

Additional parts in early stages

7 Omphalo - mesenteric espels
8 Vitelline duct
9 Allantois urachus
10 Fold of intestines

Structure of Arteries & Veins.
Mode of distribution
Trunk of Cord
Varieties of Trunks
Causes of Trunk
Varieties explanations
Spiral law of nature
Arrangement of Cord
Results of Torsion
Physiological Pathological
Results of Constriction
Physiological Pathological
Cord in Twins
Mode of separation of Cord

*12

Decidua Membrane which is known after Ovum it consists of 3 layers at first, then two & finally all form one
Ovum Uterine proper foetal covering.
When ovum is fertilized changes occur Yolk yields cleavage into 2 then 4 so on till a large mulberry like mass consisting of small vesicles, these

melt down, fluid in them & it expands out from its contents
as polygonal cells, outer cells form the Blastodermic membrane
& thus lies just in next Zona Pellucida as Vitelline Membrane.
Blastoderm - Gets clouded & opaque at a spot called
Germinal area at which point embryo forms.
If then splits into - Epiblast & Hypoblast
Area increases & becomes elongated. Another layer
forms between them the Mesoblast
Epiblast - Forms Layer forms Spinal Canal &c
Mesoblast - Elements for Vascular & Muscular System as well
Hypoblast - etc nerve membranes &c..
Blastoderm Grows on, then the Epiblast rises up in
a fold with two ridges which meet & form
a shut sac, the Sac which contains the Embryo.
Primitive Chorion - is simply Zona Pellucida of Ovum
This goes after a time, by the time the Embryo
has a shut in. Then external layer of ovum
is formed by Epiblast

Chorion - The Blastodermic layers - External membr. of Ovum
Vascular at middle layer for a time
consists of cylindrical layer of cells. Under this
a layer of Connect. Tissue. In these are Villi which get
also secondary villi. These villi push into Decidua Serotina
& Reflexa & from 2nd month on they only develop in the
part corresponding to D. Serotina, all the other disappears

Chorion then consists of two parts - One villi villi the other
having none. At part where villi enter decidua the
Placenta is formed. Two parts are Chorion Frondosum
& Chorion Leve

Hydatigenous Cysts will be considered after

Amnion - Is membrane laying nearest foetus.
It forms from the inner layer of Epiblast Epiderm
when it has closed in formed sac sac contain-
ing body of embryo. It contains amniotic cavity & thus
contains the Liquor Amnii

Corpus Reliquum of Velpeau is some Connec - tiss lying
between Chorion & Amnion.

Umbilical Vesicle does not appear as a hollow vesicle & leads
Allantoid Vesicle - Appears as a hollow vesicle & leads

out with Umbilical Vesicle & lies between Chorion & Amnion. It enlarges as Umbilical Vesicle withers. It carries 2 arteries & 2 veins the Allantoidal Vessels to the Internal Surface of Chorion & which split & pass to Villi of Chorion which they supply

Traces of Allantois in abdominal adult walls

Lecture 11 Nov 20th 1911

*12

The Placenta

Organ of connection between mother & foetus

Homology & Conversions in Structure

Forms in lower animals

Disc

Polycotyledonary

Zonary

Diffused

Average dimensions

Surfaces foetal

" maternal

Surfaces met with on section

1 Maternal portion

Three layers

*13

Cord & Placenta begin to show about 2nd month

Umbilical Cord - Sometimes not present from malformation.
when placenta is attached directly to abdomen
foetus but even then the essential structures of cord are present.
Usually about Thickness of Thumb (½ in) but depends on amount
of mucous tissue & varies in different parts of its length.
Length - Varies from 12 in - 18 in to from 14 - 15 in.
Average about 21 in. Sometimes as short as 8 in
6 in. or even only 2 in long. Long cords more
frequent than short cords sometimes 3 ft long. Longest cord of
160 was 5½ in. & shortest 12 inches. Helmeted specimen
of one ½ inches long & coiled 6 times round child's neck.
Cord for boys slightly longer than for girls.
Insertion - into Placenta, rarely central, but usually
near centre. When quite in centre the placenta
is said to grow fundus uteri & varies in uterus according to
distance from centre of placenta. It may run straight into
placenta or at different angles, & gets names according
to direction of its insertion. Marginal = battledore
Insertion? - Into Foetal Abdomen? - Consider afterwards
Its composition at later months - See Table. No structures.

Nerves - None discovered beyond Umbilical Ring

Lymphatics - No proper ones, but there are a
set of spaces with canals connect-
ing them together.

Structure of V vessels - Consist of unstriped muscular fibres principally which form its main thickness According to Mrs Jack they form a double spiral. No elastic coat & no external coat. Endothelial lining doubtful

Veins - Have valves. Endothelial lining. Half moon shaped valves & generally situated at folds of cord.

Calibre of Arteries - increases towards maternal or placental end

Mode of Nutrition - Hirschl says such vessels are nourished by V vasa V asorum, but they dont exist in the cord. Do they get their supply from blood flowing through? Yes by means of Canaliculi which end in 3 conical points thus there is no direct connection between cord & V placenta hence cord is nourished by stellate shaped canaliculi Stomata are found on amniotic surface & leading into the Canaliculi. Small foetal capillaries run into covering of cord for a short distance & thus helps to supply it

Arts scattered over surface of amnion just where it commences to pass on to cord at Placental end.

Twist of Cord - Is most frequently in one direction. As if foetus had been twisted from right to left. (Right hand screw to R of left hand screw is average)

Is this twist of cord in vessels alone? Whole Cord. Rare to find a straight cord. Sometimes twist is only slight sometimes 10 coils & always most marked towards foetal end of cord

Explanation of twist - Haller thought the arteries being longer than vein & twisted round them to use their superfluous length. This is not so for twist runs along length of foetal cord. - Thought to be from muscular contractions of foetus. Thought to be from recoil of blood escaping through abdominal ring. - Thought from larger size of right hypogastric artery giving greater impulse - Thought to be due from larger size of arteries. But peculiar cases disprove these suppositions. Paul thinks it is from mode of nutrition of cord by capillaries. We have as yet no satisfactory explanation.

Hodge used to say that there was a natural law of spirality in all development & thus may be a trace of this law. Twist starts from 6th to 9th weeks. When cord becomes as long as child it begins to coil itself round child passing over right shoulder & round neck of child. When longer it may coil round its neck & limbs

Results of Torsion - 1st Physiologically - Will equalize stream of blood & weaken strength of current. This is important in hemorrhages from placenta. It also allows of a degree of tension without injuring its vessels as if cord were stretched. Also beneficial from action of any compressing foetal which might stop vessels if cord were straight. Pathologically - Twist sometimes so

pressure as to stop circulation & cause death of child & is generally near foetus. Cause not known.
When very long & twisted round child it may by movements of child tend to tear off placenta. Or it may even amputate limbs of foetus from tightly coiling round them from its movement.
Intra uterine suicide may take place from cord being twisted & tightened round neck of child

* 13 Lecture 13 Nov. 21st

I Normal Puerperium

Three layers

1 Uterine 2 Trabecular 3 Subchorionic

1 Uterine or Parietal layer

composed of two planes

(a) small celled (b) large celled

(a) small celled in apposition to muscular parietes

(b) large celled contains the Giant cells

2 Trabecular Layer

3 Subchorionic Layer or boundary layer

Arrangement of blood vessels in maternal placenta

Uterine arteries

Veins

Trabecular sinuses = cross at capillaries

II Foetal Portion

Three varieties of Villi

1. simple non vascular
2. single stemmed vascular
3. Racemose

Structure of Villus

Relation between the Foetal & Maternal Blood

Post mortem investigations of Veit, Leopold, Hofmeier, Spiegelberg, Kaufele

Observations on Secundines

" on Puerperal Uterus

Anomalies in its insertion

Os uteri

In other localities - morbid attachments

Its afformations in its development

Functions *1/8

In case of twins each generally has its own separate cord but sometimes they become fused.

Sometimes death of one child causes death of the other

Its afformations of Cord - Rarely do two umbilical arteries, sometimes double vein. Cord sometimes looks double from artery being in one sheath & vein in another sheath.

The Placenta

Structure Spongy convolutions very complicated
Organ to bring foetus & mother in connection
Forms in lower animals - In mammalia is a similar
discoid shaped mass but their union is simpler
There is no differentiation of outer surface of chorion except
that it becomes very vascular except at its ends it is thrown
up into ridges or folds which fit into a series of corresponding
folds on uterine mucosa which is also very vascular. Thus the
whole in a sow where there are a lot of similar row.
Form is diffuse in the mare ox &c.
Polycotyledonary is when area of chorion forming tufts grasp
into different areas on the uterine mucosa. Thus is form in sheep
cow &c & chorion can hence be easily detached from
Uterine mucous membrane except where these vascular tufts
grasp into it.
In Carnivora as cat it is Zonary that is only a circular
strip round chorion which thickens & attaches to Uterine
mucous Membrane
In Human Placenta - Discoid form 7 or 8 in. in dia.
& 20 to 24 in. in circumference & about ½ in thick
Weight - varies from 12 oz to 20 oz. Grows most rapidly
during early months, from 3rd to 9th.
Surfaces - two 1 Foetal & Maternal - Smooth surface &
Concave towards foetus & is continuous with

amniotic covering of cord

Maternal Surface - Lobular, dull grayish red appearance consists of lobules or cotyledons from being divided into sections by membrane which runs over its surface running down into sulci

On a Section - 1st meet Amnion & sublayer of Mucous before then Chorion then villi of Chorion, then the hypertrophied uterine mucous membrane.

Structure of Placenta 1st & 2nd

I Maternal Portion

Three layers viz Uterine Trabecular & Subchorionic

1 Uterine - Two planes. 1. small called layer next muscular wall of uterus & not this a Large called Layer. 1 is developed from Connective tissue Uterine Mucous Membr. 2 " " from epithelial lining of uterine follicles & this layer contains the Uterine cells

2 Trabecular Layer - Dips down & separates the cotyledons It forms a meshwork peeping uterine surface It contains also giant cells & is formed like plane 2 of the Uterine Layer

3 Subchorionic - Thin layer of single or many nucleated cells

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The principal anatomical & physiological peculiarities in the solids fluids & the functions of the foetus during the later months.

1 In the Fluids

In the character of

(a) The blood (b) The Bile

(c) Intestinal secretions & contents

(d) The urine & evidence of its secretion

(e) Liquor Amnii & Vernix caseosa

Composition of Vernix Caseosa

Water	84.85
Olein Margarin	10.15
Epithelium	5.10

2 In the solids

In the exclusive presence of

(a.) Bag of membranes & Liquor Amnii

(b.) Placenta

(c.) Umbilical Cord

(d.) Umbilical Arteries & Veins

(e) Ductus arteriosus & venosus

(f.) Foramen Ovale (g) Eustachian Valve.

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Arrangement of Blood Vessels in Maternal portion - Uterine arteries spiral particularly at part where placenta is formed. They run into placental lobules about their centre there may be several arteries running into one cotyledon

Veins - At margin of placenta runs a circular marginal vein or sinus it is interrupted at various points but is called the circular sinus. Similar sinuses run round each of the lobules at margin. Walls of sinus are continuous with the large cavernous cavities of placenta.

Some describe the cavities or pools as enormously enlarged veins but more properly are capillaries for they connect the curling arteries & the venous sinuses. They are colossal capillaries from the distention of small capillaries during uterine gestation

Blood is pure & rich

II Fetal Portion

It is a development from that portion of Chorion which comes into contact with Decidua Serotina. It is the part called the Chorion frondosum.

3 Kinds of villi

1 Simple & non vascular & grow all over chorion & is composed of epith & base of Connective tissue. Not branched they are pushed into Uterine Mucosa & then lose its epithelial covering.

2 Simple stemmed & vascular. Each villus stem & its

degradation through the mucosa & hang free into the blood sinuses

3 Racemose Villi. Is a divided & much branched single stemmed villus. All have a vascular villi they pass through basal decidua & enormous part of placenta & their free ends covered by epithelium pass through maternal layers & into Uterine Mucosa their ends are blind.

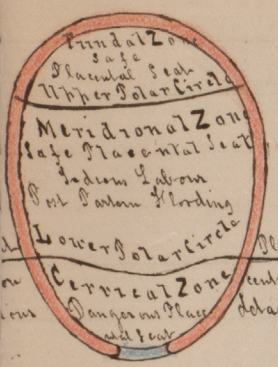
Structure of Villus - Vascular loops in centre, a capillary vessels often somewhat coherent like. This is embedded in layer of connective tissue & outside this a layer of epithelial covering of many nucleated cells. Is epithelium single or double? Turner & others say one single layer. Goodsir & others say a double layer. At most probably there is only one layer. Is this layer Fœtal or Maternal? Matter of indifference, both opinions are held.

What changes take place in fœtal blood occurs in the placental capillaries. A direct intercirculation between Fœtal & Maternal Vessels in Placenta

Seat of insertion of Placenta in Uterine Wall

Once a matter of great discussion. Is it always attached to the Fundus Uteri? Velpeau found 7 cases out of 30 had placenta opposite a Fallopian Tube. A single thought stethescope of use to indicate its position. Tell its position pretty well from position of heart in fœtal membranes. In great proportion of cases it is

...ated either on Anterior or Posterior Wall Dr Barns has divided Uterus into Zones & effects of such attachments of Placenta



may have placenta developing in various as in Fallopian tubes. Broad ligaments Ovary etc ovaries & liver Stomach in Extra uterine foetation

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p 15.

Capillary membrane - disappearance (Coagnets)
Villous bodies - vesicles
Emphalo mesenteric vessels in embryo early

1 In the relative size of
(a) Head & upper & lower halves of the body & of Skull & Visc.
(b) Limbs (c) Lungs
(d) Thyroid Body (e) Thymus gland

3 In the relative situation of the
(a) Urinary Bladder
(b) Uterus
(c) Testicles, ovaries & cauda equina

4 In the number of the bones

5 In form of the bones, Face, Kidney, two sides of heart

6 In its functions

(a) in the mode of nutrition
(b) in the mode of respiration
(c) of excreting functions
(d) of animal life
(e) of Circulation

The effects of the Foetus

In the first period
In the later months
By liquor amnii introduced by
1 the mouth (Hallen, Meckle)
2 the skin (Lovett, Oscander)
3 the mammae (Cruveilhier, Muller)
4 the genital canal (Robertson)
5 the lungs (Schwabe, Winslow)

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Malformations of Placenta - Sometimes bilobed appearance may be demarcated when in two pieces & bipartite & so forth. If separated parts are small they are called Placenta succenturiata & there is danger of small part remaining in uterus at labour. Membranous funis. Velamentous funis &c..

Functions of Placenta - Will be considered after

How to do with changes of foetal blood

Its blood contains a large amount of urea & carbonic acid & small

amount of albumen & fibrine

The Foetal Blood - Darker less arterial looking than maternal blood

The Bile - Begins to secrete from 4th to 5th month
Pale & watery bitter principle

Intestinal secretion - Collects from 6th month on - Consists of destroyed epithelium Cholestrin & Bile matters

Urine & evidence of secretion - Not very various. Mostly secretions from walls & may contain albumen.

Liquor Amnii - Urine secreted some how or in small amount both at afterwards. Is source doubtful Whether from general amniotic surface or from placental surface. Larger quantity in proportion to foetus the 4th month but decreases afterwards. Sebum floats in it.

Various Excreta - Cheesy matter, downy adhering to foetus some floating in liquor amnii. Composition given in table. It subsequent shed during process of parturition.

1 In the Solids

Membranes which he have studied

Placenta Also

Umbilical Cord Allo
Umbilical Arteries & Veins
Ductus Arteriosus & Venosus
Foramen Ovale
Eustachian Valve
Pupillary Membrane - disappears about 7th month
Wolffian Bodies - vesicles - amplify mesenteric vessels

2 Relative size of Parts.

Head is at first far larger than body relatively but gradually becomes more proportionate
Liver is relatively very large in foetus & also in new born child
Lungs - solid & dense in uterine life. Distensible at birth but before are collapsed & dense hence heart is best heard from back.
All glands as Thyroid & Thymus are relatively much larger Also supra renal bodies

3 Relative situation of Parts

a Urinary Bladder is in foetus as fundus abdominal.
b Uterus, ovary, testicles & cauda equina are all abdominal

4 Number of bones

Many of bones still in distinct pieces which afterwards unite as of pelvis & thorax &c

5 ½ rms of

Liver - two lobes nearly equal. Left lobe being disproportionately very much larger

Kidney - divided parts as yet wholly united into a distinct whole

Heart - Different altogether in functions

In its functions

(a) Modes of Nutrition:- Enormous during the 9 months of uterine life

It grows from a microscopic body to a 10 lb body

It increases from 1120 to 1140 thousand times.

In the first period? Supposed by an endosmosis when still an ovum, as in seeds &c. Suppose it must be purely interstitial. Chorion at first smooth, gets rougher & larger area for absorption from villi with their epithelial cells. After time when Blastodermic membranes are fully developed absorption is no doubt from germinal area, then from umbilical vesicle. That vesicle gradually disappears then from fluid between chorion & amnion supposed to be nutriment.

Sup. Amnii is most probable. The source of nutrition is taken in through mouth, skin, mammary glands through genital canal & through lungs. all supplying different need.

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Glycogenic function of foetus

Analysis of Liquor Amnii

	Foetus of 3 months	Foetus of 6 months
Water	979.45	990.30
Alcoholic extract composed of animal substance & lactate of soda	3.69	0.33
Chloride of Sodium	3.95	2.40
Sulphate & Phosphate of Lime	0.14	0.30
Albumen	10.77	6.67

Composition of Liquor Amnii & Milk Per Cent

	Liq. Amnii	Milk
Water	983.4	886.
Albumen	5.9	39.
Albuminate & Chlor. of Sodium (Casein)	6.1	26.
Extractive matter	4.6	49.

Length & Weight of Foetus

Month	Length	Weight
1st	1/2 in	—
2nd	1 - 1½	3 - i
3rd	3 - 3½	3 - ii
4th	4 - 6½	3 - iii
5th	7 - 10½	3 iv
6th	11 - 13½	lbs 9½
7th	13½ - 15½	lbs 4½
8th	15½ - 16½	lbs 6
9th	16½ - 17½	lbs 7½

Comparative weights of Adult Infant & Foetus

	man æt 30	New born Infant	9 mt Foetus	6 months Foetus
Weight of whole body in grammes	64648	2400	2364	643
P.C. proportion of skeleton	15.9	17.7	15.4	20.3
" " of muscles	41.8	22.9	23.9	22.3
" " of thoracic Viscera	1.7	3.0	-	-
" " Abdominal Viscera	7.2	4.5	-	-
" " of Fat	18.2	-	13.5	-
" " of Blood	6.9	20.	11.3	14.8
" " of Brain	1.9	13.8	12.2	18.

* 1st

Nutrition is not thorough Org. Amin at later months
See comparison of it. When compared with milk it is very
poor in albumen butter & extractive matters.
Org. Amin is often mixed with rotten matter & in fact it
may have almost all escaped before birth (dry labour)
hence it cannot have fed it.
It (child) cannot always have been fed by mouth for cases
of cleft palate to occur in new born children And so
there are objections to other modes of nutrition.
Nutrition through Placenta
Proofs - By placenta be discased nutrition is interfer-
ed with & foetus dies. No direct communication between
foetal vessels & maternal. Ab may bleed a woman to death
& still not take blood from child not a drop. Foetus

may bleed to death in utero & still mother not lose a single drop of blood.

The foetal placental villi of foetal part enter into maternal part of placenta is important. Capillaries are in villi but are separated from maternal blood in cavernous sinus into which villi hang, by wall of capillary then base of tissue of villus & villi thus epithelial cells. These cells take up from the maternal blood the matters required for nutrition of foetus. The matter exudes through cells, basement membrane through wall of capillary & into its canal, then on to foetal arteries to its body & back by veins. All this can be proved by drugs taken by mother as other hypertonic agent chloroform salycilic acid. The villi must be looked on as glands preparing & elaborating the fluid to from maternal blood for foetus. This fluid or blood may be considered as a sort of milk & it does contain casein.

Glycogenic function of Foetus - Glycogen is found in foetus in early stages. Liver of foetus taking up glucose & transforming it ~~into albu~~ amniotic acids are richly charged with glucose, also in skin muscles, intestinal tract. After birth it disappears with being development of respiratory function

2nd Month - Limbs appear as tubercles. Afferent vessels vertebral arches division of limbs. Head large

Degree of growth of Foetus

1st month - Some size of pigeons egg. Umb. V. erecte
continuous with gut. Amnion closed

2nd. month - Immense changes. Size of egg hens
permanent form - Extremities with their divisions
Umbilical forming - still containing bowel

3rd. month - Size of goose egg - Bowels retracted from
navel. Ossification of most bones - nails on fingers &
toes - External genitals begin to differentiate

4th. month - Sex recognisable Afterwards embryo as a foetus

5th. month - Skin transparent - Hair on head appearing
Lanugo over whole body

6th. month - Fat getting deposited beneath skin. Head disportion-
ately large - wide sutures & fontanelles - of born
from 5th

7th. month - Eyelids separated. If born move & cries weakly

8th. month - Pupillary membrane disappears Skin still red

9 month - Excess noticeably Hair ripe foetus

10th. month - Lanugo quite lost Hair visible on shoulde
& nails not to fingers tips. At end of month has
all the peculiarities of ripe foetus

In the 3rd & 4th months foetus measures 3 & 4 inches respectively
In the 5th. 6th. 7th. 8th. months " " 10. 12. 14. 16 inches
In the 9th. months - 17 in. 10th month - 19 inches

The above table is according to the menstrual period expected to 10 months.

Lecture 19 Nov. 18th

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Respiration of the Foetus

Mode of accomplishment

1 In early intra-uterine life

2 In later periods by means of

(a) Liquor Amnii (Beclard &c)

(b) Placenta

Evidences of Placenta serving as Foetal Lungs

1 No other medium

2 Placental vessels same as allantoidal vessels

3 Differences of blood in Umbilical Arteries & Vein.

4 Effects of interference with Placental circulation from

(a) Compression of Foetal Vessels

(b) Destruction of connection between foetal & maternal vessels

(c) Draining or poisoning of maternal blood

5 When Respiration established placental circulation ceases.

Evidence of respiratory efforts.

Mechanism of the process

Slight changes required

Analogy of the intra uterine foetus to hybernating animals.

Ages Various

Peculiarities in the secretions & excretions

Sebaceous

Renal

Hepatic & Pancreatic

Intestinal

Are any excretory matters eliminated by Placenta

Peculiarities of the functions of animal life

Motion	Quickening
Attitude	Sensation

Circulation of the Fœtus

In the early weeks - vascular

- area of Pander

During the later months

Anatomical Peculiarities of Circulatory System

1st. Two Umbilical Arteries
2nd. One " Vein
3rd. Ductus Arteriosus
4th. Ductus Venosus
5th. Foramen Ovale
6th. Eustachian Valve

Fœtal circulation single with a double heart

Course of Circulation

A From Placenta to upper part of body
B From upper part of body to Placenta

Hence only streams of blood in right auricle opposite openings

Evidences of separation of currents from

1st. Structure of the arts
2nd. Experiments

Auscultation of Fœtal heart. *18

Respiration of Foetus

In early months foetus absorbs oxygen from its surrounding medium just as egg absorbs & stored at end of shell.
Is said to be absorbed from hepatic ameni but small quantity of amn in foet it contains none from analysis

1 Placenta is means by which foetus gets its oxygen indirectly from lungs of mother. 2 Allantoid vessels oxygenate the chicks & in foetus Umbilical vessels form from them & hence are analagous to them. 3 Then again there are differences of colour of blood in Umbilical Arteries & Vein

If child dies of suffocation if Placenta or its vessels be interfered with as by compression & foetus kicks & struggles just as a suffocating adult would do. Same occurs if connection between Foetal & Maternal vessels as by detachment of Placenta before labour. Same occurs if woman be bled to death thus cutting off supply to foetus Drowning or suffocating mother causes same effect.

5 Respiration ceases through Placenta when birth occurs & Lungs come into action

Villi of foetus are supposed to have an analogy to the Branchiæ of fishes, gathering oxygen from maternal blood poured into the Maternal cavernous placental sinus, in which the villi hang.

Foetus has no loss of temperature from its surrounding medium & thus somewhat resembles hybernating animals

Ovum in the Uterus - Laying of ovum in uterus. Not likely except in some cases of labour where ova may have got into uterus, but doubtful

Peculiarities of functions of Foetus

Bile is purely excrementitious having nothing to do with digestion is thrown into intestine along with meconium mucous broken down epithelium

Pancreatic secretion - Not mentioned

Sebaceous secretion - Vernix Caseosa

Placenta is supposed to perform the functions of excretory organs for stomach lungs kidneys &c. & hence performs most important functions

Peculiarities of Internal life

1 Incessancy of Motion - already mentioned

2 Attitude - will be specially treated on

3 Sensation - occurs as seen from foetus withdrawing any limb upon which held or squeeze.

Circulation of Foetus in Utero

In early weeks - Primary or Vitelline Circulation for first 10 or 12 weeks Area Vasculosa Umbilical Vesicle & Allantoid at Cord Then by Umbilical Vessels.

Heart is first appearance of formation of Circulatory Organs

Anatomical Peculiarities of Foetal Circulation

1 Umbilical Arteries 2 . 2 Umbilical Vein . 3 Ductus Venosus running to Liver & into Vena Cava . 4 Ductus Arteriosus

Foramen Ovale uniting right & left auricles of heart

It is a single circulation with a double heart

Intermingled blood ascends to upper limbs . then to lower limbs that blood to lower limbs is partly venous . Best stream in auricle (Set up Foetal Circulation)

Lecture 20 Nov. 29th

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Sounds of the Foetal heart

Character - date of first detection - frequency

In 600 cases frequency 98 - 170 average 136 (Naegle)

In 51 cases frequency 108 - 160 average 133 (Duncan)

Variations in frequency

Site - Sources of error

1. The mothers heart
2. Auscultators own heart or watch
3. Absent occasionally
4. Changes in it
5. Sounds from Umbilical vessels
6. Sounds from movements of foetus

Its value as a Sign of Pregnancy

" " " " " of Position of foetus

The value as a sign of Presentation
of life of child
of Twins
of Sex or Size

Indications during Labour
Influence of uterine contractions
Attitude & Position of Foetus
Definition of Presentation
Position Attitude
of cranial position & presentation
When opened - at 7th month (Appearances &c)
From commencement of Pregnancy (Changes, Inclusive)
During the last months (Dreamy one)
Changes in Position & Presentation
Conditions favouring changes
Positions regarding changes of position
Causes of Presentations & Positions
1 Gravitations
2 Instinctive movements of foetus
3 Changes in Foetal circulation
4 Accommodational theory

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Foramen Ovale starts to close about 5th month & finishes at birth

Disputed as to whether there is a cross stream & if so could be without blood commingling in crossing. I do not think it can & does so.

Foetal heart gives a double sound but beats very rapidly 130 to 140 per minute or generally about double that of mothers heart. Sounds like a muffled watch

Site of hearing foetal heart - best according to position of heart sources of error - 1 Mother's heart. But put your finger on her pulse while hearing for foetal heart 2 Beware of your own heart or watch 3 It may not be heard from position of foetus. 4 Should the sound of umbilical vessels 5 Also sounds from motions of foetus

Value as a sign of Pregnancy - One of most important proofs

" " " " of Ovulation - Can get an idea for heart being heard best through back of foetus wherever in mother we can hear best there the back of foetus is probably there. Also height of heart sound in Womb gives an idea as to which way it lies, as heard up or down

Value as to Twins - Hear the two foetal hearts.

" " " Sex - According to beats of heart. Those of girl being about 130 & of boy 120 Boys being slowest. But really this is more according to size of child, heart being slower longer the size of child

Indication from Fœtal Heart during Labour.

If interference with Placenta or Umbilical, or from spasmodic & continuous contraction of uterus, the child heart gets slower & slower till death, while mothers heart goes quicker & quicker

Attitude & Position of Fœtus

Presentation - explained the line of the child in the relation to the uterus by both their long axes. Long axis of fœtus should correspond to long axis of uterus. Not often otherwise. 96 per cent are normal with head presentation. Transverse presentation occurs, then we state its position according to that of back which is mostly towards left side & either backwards or forwards.

Attitude - Head bent on & posterior extremities also so child is somewhat boat shaped. Hands & arms crossed on chest, larger bent up on abdomen. Legs doubled up & feet pressed up against thighs then pressed against abdomen.

This is normal position, & if another position at birth child is generally dead. Child even has a tendency to remain as after birth

Head Presentation — 96 per cent. One transverse in 236

Breech - are about 3 per cent.

Child suffered once to die with breech down on os Uteri

2 Uterus only turning head first when labour came on. But really it starts to turn its head downwards about the 6th or 7th months. But foetus always changes its position more or less

Rarely the child's back retains its position throughout. Changes of position are more frequent than changes of attitude & often in Multiparous than Primiparous woman.

Abnormal contractions of uterus apt to change child's position. Changable in women with chronic catarrh of womb.

Yet the healthy foetal heart beat the more constant the position of foetus. Knots & short cords apt to alter position. Elasticity more added in last months. In Primiparous women there is no change in last weeks, but in Multipara the changes of position may occur up to last hour.

Causes of Presentations & Positions

1 Gravitation - Head sinking lowest from its more weight once thought to be case. But this is not so for if foetus is put in water shoulder goes down first. Again foetus is neither suspended in womb, back is at top a very wrong saying.

2 Intrauterine movements of Foetus - Evidence of from voluntary muscular action Sir J. Simpson showed that all its movements were reflexe

3 Circulatory theory. At end of 6th month upper part of foetus more richly supplied with blood

& Lenec Leaser

4 Accommodation Theory - the 1st important. Means being Ovoid at first, circular about 4th month & then foetus lies any way, then becoming ovoid with narrow end down, then head smallest part goes down into smaller end of ovoid

Lecture 21 Dec. 3rd 1777

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Reflex or Excito motory Muscular Movements

1 Mode of maintenance or attitude
2 Mode of assumption
3 Nature of stimuli exciting them
4 Parts of the Skin susceptible of Stimuli
5 Degree of movements & period of commencement

Causes of Malpresentation

1 Premature birth of Parturition
2 Death of child in utero
3 Extra uterine diseases of foetus altering its form
4 Malformations & Monstrosities altering its form
5 Twins
6 Hydramnios - an excess of Liq Amnii
7 Organic disease of uterine parietes

8 Spasmodic contractions of Uterus
9 Placenta Praevia
10 Distortions & Contractions of Brim of Pelvis
11 Irregular conformation of Uterus
12 Mechanical & casual displacement of foetus

Normal Conceptions
Twin. Complete &
Pregnancy

Causes
Relations to Uterus & Uterine Membranes
Relations to Foetal Membranes & Placenta

Proportion & Relation of Sexes
Degree of development of Children
Independance in degree of development
Foetal relations

Superfoecundation & Superfoetation
Diagnosis of Twin cases
Form of the Uterus
Palpation
Vaginal explorations
Auscultation

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Presentations in 808 Labours with Twins

	Whole total no. of cases	Head Presentations.	Pelvic Presents.	Transverse Presentations
Clarke	126	73	53	—
Collins	149	309	133	7
Hardy & Mrs Lindoe	190	123	62	6
Ramsbotham	772	532	221	19
Simpson	30	23	7	—
Reid	48	25	22	1

Presentations in Abortions &c (Paul Dubois)

Period of Preg.		Arms	Breech	Head	Whole	P.C. for Head
Before 4th month	Alive or dead	5	51	61	117	52 in 100
During 4th month	Alive	2	10	61	73	83 in 100
During 4th month	dead	4	21	21	46	45 in 100
During 3rd & 4th month	dead	2	12	72	96	76 in 100
At full time	alive	1	3	96	100	96 in 100

Table of the Relative proportions of Head presentations as varied by the date of the Pregnancy or Labour

Period of Preg.	Total cases	Shoulder	Breech	Head	P.C. of Head
Before end of 6th month	121	5	51	65	52 in 100
During 7th month	119	6	31	82	68 in 100
During 8th & 9th	96	2	22	72	76 in 100
At full term	100	1	3	96	96 in 100

Causes of Malpresentations

1 Premature Birth - See tables for per centage &c.

2 Death of Foetus in Utero - Child loses power of maintaining its proper position in uterus, & especially in case of pelvic foetuses for if only just dead might be born normally head first.

3 Intra uterine diseases altering form of foetus - as Ascites, Tumours, Hydrocephalus of Foetus. In Hydrocephalus - child gen.ly presents as breach. Head presents 1 in 9 P. P. Pelvic 1 in 4 Transverse 1 in 60

4 Abnormities - are gen.ly born abnormally & often by head presentations.

5 Twins - May both present head See Table
Pelvic 10 times more frequent
Transverse 5 times more frequent
Occurs from packing of children in uterus

6 Hydramnios - often causes alterations of presentation for foetus is so free that it easily moves in L. Amnii

7 Spasmodic contractions - Foetus moves about to adapt itself to altered.

8 Organic disease of Uterine Walls - As Fibroid tumours bulging in & sheltering foetus

9 Placenta Previa - Where remains more rounded from Placenta being over os, hence foetus easily shifts. Placenta P. are also very often premature

Does also tends to cause alteration of position
Alterations & contractions of Pelvic Brim - Hinders foetal head from settling down into Pelvis - Often small pelvis uterus as height up in abdomen & hangs down in front of Pelvis
Irregular form of Uterus - As when it remains some what in its original form of two tubes being transverse & two vertical.
Malposition & casual displacement of foetus - As in Shakespeare where uterine & abdominal walls are very lax.

Fetal Connections

When two or more ova are fertilized
Twins occur as 1 in 84
Triplets occur as 1 in about 7000
Four occur as 1 in about 1,000,000
Five occur as 1 in about 20,000,000

Unstable only never more than four at a birth in woman
A woman give birth to 3 4 in 24 cases of labours
Twinning runs in families
Imbeciles & idiots are largely twins
Twinning families - often deficiencies & deformities
Twinning is injurious to mother & children
No twins are genuine.

Causes

1 Twins may be when two ovules deliver at once
2 More frequently one ovule but containing two ova is cause of twins.
3 Single ovum and growing rise to two foetuses. Don't know how. We have double yolked eggs
Single ovum – might form two from germinal area splitting, may be from foetuses with cord & then forming two independant bodies
We can often trace that twins arise from 1 ovum from
(1) Relations of twins to uterus & its membranes
(2) Relations to foetal membranes & placenta
May have one decidua and
When two ova they have separate decidua reflexa
& two ova their placentas will be quite separate & detached though may be from same ovum
When from one ovum splitting, chorion is common & also a double amnion, & Placenta is also common
Thus we must study membranes & Placenta to tell whether twins are from a single or double ovum
In 126 cases – 31 from single ovum & 95 from 2 ova

Lecture 22 Dec. 14th 1877

20 Natural Period of Human Gestation

280 days { 40 weeks
10 common lunar months
9 calendar months 1 week

Variations in terms of Calendar months

Data of Calculation

(a) Ascertained date of impregnation
(b) Location of foetus at time of conception
(c) Commencement of morning sickness
d Suppression of Catamenia (most important)

Mode of Calculating

(e) Period of quickening - Fallacies from

1 Quickening supposed when no pregnancy
2 Pregnancy without quickening
3 Variations in time of its occurrence

(f) State of Breasts &c in later months
(g) Abdominal Tumour
h Development of Infant at birth
i Ossification of Nuclei in Utero

Degrees of Shortened Gestation

Abortion & Premature Labour

Earliest date of Viability of the separated infant

Limits as fixed by Law Courts

6 months - Scotch historical Court
180 days - French Code

Opposing Opinions of Medical Authorities

1. Not until the end of 7th month of intra uterine life

2. Before the end of 7th month

Negative in support of first opinion

Physiological Reasons

Cases of viability in small infants

The kind of evidence to be looked for in the question

a That of first children

b That of children born shortly after a previous pregnancy. *21

Proportional & relation of Sexes

Twins - In 64 Cent they are of same sex

100 female to 106 males in single labour

97 boys to 100 girls in twins

When twins have development from two ova, then sexes are more likely to be different than if from one ovum. When from a single ovum - the two are of the same sex & bear a striking resemblance to each other in features character &c.

Three matrimonial in law - Is the fact that if a cow has two male calves at one birth, she is unfertile after

Twins are generally cast before full time. Their size & weight usually small from 3 to 4½ lbs the average weight of both being about 4½ lbs. But remarkable degree

of independance of development., for they are rarely of the same size, marked difference, for each leads a separate existance. One may die & the other go on to full time & be born fully developed, the dead foetus becoming compressed & mummified. One foetus may be expelled & other remain & develope to full term.

Ovular Relations

Great mortality. Death of one or both in 21 cases

Then vitality is low & twins are difficult to rear

Superfoecundation - Introduction of seminal fluid of different men fertilizing two ova at one menstrual period as a black woman having a black child & a white child

Superfoetation - An ovum fertilizing after the woman is already pregnant. Thus the one child might be 9 months & the other 8 months & so on. Sometimes double children are born 4 or 5 months apart & these are the cases which are strongest in support of superfoetation, but then comes the question Does ovulation occur during pregnancy? No evidence of it. Possibility of it in some abnormal cases, but no proofs

Diagnosis of Twins.

Very difficult. Signs of uterus - early. Bigger but might be from one large size except by ligr. amnii. Sometimes can see an irregularity in form of a groove running in long axis of uterus. But this is rare & might

the present pathological signs as from tumours &c
2 D. Palpation - with one hand in vagina & may thus
be enabled to make out two children. 3 Ballotment - may
be of some use but not at all sure. 4 Auscultation -
can sometimes detect two foetal heart sounds. One twin
might be dead though & so lying that we could not
hear heart sound of it. Hence diagnosis uncertain
Natural Period of Gestation

Harvey says Christ's period is the perfect one & Harvey
is about correct especially correct. He says it was 25th March
(Lady Day) to Dec. 25th the birth of Christ (Xmas Day & this
Harvey says is a type of the most perfect type

Lecture 23. Oct. 3rd /77

*23

Degree of protracted Gestation

Extended limits allowed by most law courts

Scotland	10 months
Russia	302 days
France	306 days

Medical evidence against protracted gestation
Their contradiction as to supposed fixed period
Proofs in favour of protraction of period from
A. Observations on human female
B. " " lower animals

Probable causes of variation from standard period

1 Constitutional in some females

Always protracted in some (Mammalia)

Always premature in some (Lamont)

2 Variations of hopes & frequency of menstruation

*22

Normal period of gestation is 10 menstrual periods

is 280 or 9 Calendar Months & 1 week

is 10 Lunar months.

Often females can tell from the day they are to be confined and from being able to tell when fruitful coitus occurred from peculiar sensations at times. This is unreliable

Also be from morning sickness

Suppression of Catamenia most important sign of pregnancy but even this is fallacious & then does not tell when fruitful coitus took place.

If fruitful coitus gen[erally] occurs within a period of 1 week of menstruation. Most writers believe conception possible even 14 days after menstruation but not longer, but gen[erally] within a week or 10 days after cohabitation

73 P.C. within 1 week occur. But few cases are recorded till 8th day after & no coitus but all their conceptions occur after 8 days. Fertilization is not usual for about

1 week before menses, for uterus is almost occluded from its congestion at that period. Possibly conception may occur then.

Menstruation may occur once or twice after conception, but this seldom occurs in women who are regular

Mode of Calculating Time of Confinement

According to tables in Pocketing List

Reckoned from first day of last menstruation & reckon 9 Calendar months on & add 7 days.

If she cannot tell us of Calculation inquire of

(a) Quickening - If allowed for suppression of this word & when no pregnancy as in Case of Bloody Mary Queen of England wife of Philip of Spain, but her case was only dropsy 2. May be pregnancy without quickening. 3 If quickening & genl. occurs first from 15th. to 20th. week average of 130 days. Fœtus has genl. about from 4½ to 5 months to run after.

(b) Shortening of Cervix - Does not really shorten, but seems to do so from 6th month on. This is a poor guide

Size of Abdominal Tumour - Is a more serviceable & more reliable sign of period of pregnancy

Measurement of Fœtus in utero - Not by using callipers pushing one point at Symm of pelvis & the other at fundus uteri this gives us half the length of fœtus.

Duration of shortened Gestation

Abortion before 6th month

Premature labour - to a viable child which Scotch Courts fix at 6 months but French code at 180 days.

Certainty no doubt of viability at 7th month for Sir Isaac Newton was a 7th month child. also George 3rd was a 7th month child. Not much question of viability at 6th month. Some believe even at 5th month viability.

Abortion could be fixed on a quart pot at 6 months

In numerous cases of viability at 6½ months

The sort of evidence to be looked upon in the question

A. Size of first children

B. Children born shortly after previous parturition

One case of a child born 170 days after a previous labour & it lived & was reared

Duration of Gestation

Extended limits allowed by

Scotch Courts	10 months
Russia	302 days
France	300 days
Switzerland	308 days

In extra uterine Gestation often after normal period

In the great Lowe case of Lady Gardiner it was stated that her child was either of 300 & 311 days. It was decided to be illegitimate & got in adultery the mother being divorced

Lecture 24 Dec 6th 1877

*22 2 Difference in time of descent of Ovum
3 Variation in period of conjunction of spermatozoa & ovulum
4 Mixed Labour
5 Influence of the Father
6 Influence of Age
7 Sex of the Child

Exciting Causes of Parturition

Why does Labour supervene at a fixed period?

a Causes on the part of the foetus & its appendages

b From causes on the part of foetus

1st Irritation of the uterine contents on the uterus: like fæces of the Cornu & Os

2nd Elastic reaction of the over distended uterine fibres

3rd Ultimate loss of equilibrium between the fibres of the uterus & the resistant fibres of the Cornu

4th Completion of muscular organization of Uterus

5th Increased excitability from recurrence of the menstrual periods

6th Some changes in the Ovary reflecting an impression on the uterus

7th Detachment of the Deciduæ

The period of gestation is independant of any physical changes in or states of the foetus & uterus shewn by symptoms

1 In some extra uterine pregnancies

2 In animals which have been on heat but not impregnated

Gestation has undoubtedly been carried on for a month past the ordinary period

Rabbit carries its young 31 days but may handle as early as 27th day or as late as 35

Ass uses carry normally 335, but might be as early as 240 days or as late as 419 a difference of 179 days

Cows carry 280 days but have varied from 240 days to 321 days, a difference of 81 days

Causes of Gestation in Women -

1 Constitutional Causes habitual to some females, some being unusually elongated gestations, others have always premature gestation

2. Also length of gestation corresponds somewhat to cycle of menstruation. Thus if menstrual cycle be 21 days labour will come before the ordinary period, if 30 days gestation will be above the ordinary period. Multiply the menstrual period by ten. Thus menstrual

period 28 days gives 28 × 10 = 280 length of gestation
this is the normal period. If menstrual cycle be 21 days
21 × 10 = 210 days = 30 weeks length of gestation.
If menstrual period be 30 days (illegible) 30 × 10 = 300 days
is the length of gestation.

2 Difference in time of descent of ovum.

Beard considered & also by Simpson that when an ovum
descends & is not fertilized it is thrown off with the mucous
membrane of that menstrual period. Coitus may be not before
the menses have come on & might be after hence there might
be a difference of several days as to period of conception.

3 Variations of period of confinement of uterus. & Evolution
of. Abnormal labour. When pains come on & all the
symptoms of labour perhaps from diseased states. Pains be
stop off & perhaps don't come on till time of what corresponds
to next menstrual period. Child may be child is then dead

5 Influence of Father & Age. both affect length of gestation
7 Male also have longer gestation than female children
8 Primipara and a little longer than multipara

Unmarried woman and rather longer than single women
Still a disputed point as to whether it is ovum which descends
with last menstrual flow or that ovum of next period
without flow, which is fertilized Length of
gestation greatly depends on size of animal, smaller the
animal shorter the time as guinea pig 3 weeks an elephant

as long as 20 months

Why does labour supervene at a fixed time?

(A) From causes in fœtus & its appendages from various exciting causes. This was formerly believed to be the case, but not now.

(B) From causes in part of the Uterus

1. From fœtus irritating the sphincters &c. But this is not proved for we find os actually much dilated one month before birth

2 From over distention of uterine fibres. This could scarcely be for the uterine walls grow all through out the period & accommodate any increase of contents

3 Loss of equilibrium between the fibres of uterus & resistant fibres of cervix. etc. proofs.

4 From complete muscular organization of uterus being attained & hence quite capable of expelling the fœtus

5 From increased work thrown from recurrence of menstrual period. Each getting more powerful like it reaches its culminating point at 10th month

6 From changes in ovary reflecting an impression on the Uterus. 7 Separation of the Decidua

There is as yet no proof of what causes labour to come on no doubt from irritability but dont know what causes it. There is a change in the Mucous Membrane & this

is not completed till 11th month
When this change has occurred labors of womb fully developed, foetus at full size, perhaps change in mothers blood from CO_2 & nervous development of uterus completed then all being completed foetus becomes as a foreign body & uterus then contracts to expel it & hence what we call as labour.
But we still in the dark as to why these changes should all occur & take place at certain definite periods. Science observes all this & can state it truly but cannot show why. It is simply a fact. They are forefathers inherited in the growths of foetus & uterus & the 9 months period is especially stamped on the female.

Lecture 25 Dec. 10th/77.

* 23

Labour may be accidentally or artificially excited
By death of the foetus
Exceptions to this rule
By excitation of the Sym. System
By partial separation of the membranes of placenta
By mechanical dilatation of cervix &c
By organic obstruction to the development of the Uterus
Spurious Pregnancy or Pseudo cyesis
Time of its occurrence
Varieties 1st Local 2nd Constitutional

Pathology of the disease

Symptoms

Usual constitutional symptoms of pregnancy

Accessory symptoms of pregnancy

Physical Diagnosis

1 Inspection 2 Auscultation

3 Percussion 4 Anesthesia

5 Palpation & Vaginal examination

Differential Diagnosis

Prognosis

Treatment

1 Raise the patient to standard of health

2 Counteract or cure any existing uterine or ovarian disease

3 Administer uterine sedatives

4 Reduce & relieve individual symptoms

Pathology of Pregnancy

1 Nervous system & Brain

a Insanity

b Paralysis

c Epilepsy

d Chorea

e Convulsions

f Sleeplessness

g Hysterohondriasis

h Cephalalgia

i Affections of the organs of sense
j Rheumatic
k Other neuralgias

2 The Blood & Vascular System.

a Exaggerated evolutions of normal change
b Enlargement of the Thyroid
c Diseases of the Spleen
d Varix
e Palpitation Syncope

3 The Respiratory System

a Dyspnoea
b Cough
c Hæmoptysis

Influence of Phthisis & Pneumonia *24

Spurious Pregnancy or Pseudo cyesis

Occurs often. Most deceptive when near termination of menstrual life. Also in recent married women. Can occur at any time during woman's life. Can occur in young & in single women

Two varieties Local & Constitutional

When Local - woman has often endometritis or oophoritis. At other times an abnormal state but only constitutional

When Constitutional. First a train of symptoms of conception

Symptoms - All those of usual symptoms of pregnancy. Ie
Vomiting, Menopause, morning sickness, enlarging
of breasts & areola, abdominal distension. They often
think they feel quickening movements
Also accessory symptoms - as those subject to convulsions, or salivation
or skin diseases during pregnancy occur during spurious.
We general find that there is something absent or wanting
- may be menstruation, no foetal motions We must make
it Physical diagnosis - Abdomen may be as if pregnant
Swelling of abdomen more rounded & spreads
all over abdomen & does not come from below as pregnant
uterus would. Umbilical depression remains & is not flattened
out or forgetting out, dark line may be present or not
but is not so distinct. 2 Auscultation - Get negative results
no foetal sounds. 3 Percussion - gives the clear tympanic
full note & not the dull sounds of pregnancy for swelling is
formed air & not pregnancy 4 Palpation - Patient on
her back & hands drawn up. Abdomen may sometimes be seen to
be hypochondria. Can feel foetus. May feel movements
but not of foetus & must withdraw the patients attention
for she produces the movements by the abdominal muscles
5 Palpation & vaginal exam. Normal dischargers of vagina
course gone. Thickened & uterus not enlarged as in pregnancy.
6 Auscultation - Its effects come on gradually abdominal
walls often flatten & become lax & roundness

disappears & can also feel empty uterus

Differential Diagnosis - From pregnancy. From Fibroid & Ovarian tumours. The loose kidney has been confounded with pregnancy

Prognosis - Bad cases. Different in different cases

If spurious it ends with diagnosis. In newly married women it ends in about 3 months generally. In those near end of menstrual life it may send on for about 9 months & may end in a simulation of labour. It may last months in those past the climacteric. Sometimes it has lasted years & symptoms of labour come on every nine months & they are very difficult to persuade that there is not either a foetus or some other living animal

Treatment - 1 Raise health as by tonics &c

2 Cure any uterine disease that may exist

3 Administer uterine sedatives as Pot Bromide Pot Iod Ammon Bromid Injections & pessaries

4 Relieve nutritional symptoms as Pruritus &c Relieve hypochondriasis & constipation by Calomel Assafoetida Ox gall & Castoreum with Nux Vomica Magnesia Charcoal Bismuth &c

* 2 H

H Digestive & Excretory System

A Gastro intestinal canal

1 Disordered appetite

2 Salivation

3 Nausea & vomiting

Causes. Treatment

Diet & Regimen. External applications.

Aperients. Procure abortion Sedatives

4 Hæmorrhoids

5 Diarrhœa

6 Constipation

B. Liver

1st. In later weeks

2nd. In earlier Acute yellow atrophy

C. Urinary Organs

Incontinence Retention Albuminuria

5 Effect of Epidemics

a. Influenza

b Cholera

c Typhus, Typhoid & Relapsing Fever

d Small Pox

Consequence to Mother

Consequence to Foetus

6 Rheumatism

7 Syphilis

* 25

Lecture 26th. Dec. 11th. 1918

Pathology of Pregnancy

1 Nervous System & Brain

(a) Insanity often occurs

(b) Paralysis

(c) Epilepsy

(d) Chorea - often occurs in young primipara. We can generally trace a history of Rheumatism. Sometimes it is associated with Scarlatina. Heart is bilateral in three cases. P. is in motion day & night unless under anaesthetics. It manifests itself in Patients who have not had chorea previous to pregnancy. If pregnant patient lives through it, she is liable to re-attack. Chorea is very fatal in gravid women 20 out of 60 cases. Give bromides as antidote at earliest appearance, Pot Brom., Chloroform & anaesthetics for rest. Procuring abortion is very unsatisfactory. Get health to highest possible standard

(e) - Convulsions - Appt to occur towards end of gestation, or when labour occurs. In large portion of cases it is associated with renal disease. We often have gravid women exhibiting hysterical convulsions which last some time but there is no disturbance of the renal organs

(f) Sleeplessness - Often dangerous in a Puerperal woman. If for two or three nights watch for insanity. If during pregnancy, let patient have plenty of exercise good

ing, good diet, warm baths. sedatives as henbane Cannabis
Chloral Pot. Bromid &c

(5) Hypochondriasis - is one of forms of insanity occurring during pregnancy. Generally some gastro intestinal irritation to remove. Do not confound it with brain or cerebral affection

6) Cephalalgia - Hemicranic headache common in gravid women. Induces diet stimulants. May affect just one optic, if so give Castor Oil & follow with Iron internally & Bromide as Zinc.

7) Affection of organs of Senses - Ringing in ears, flashing of eyes &c Always examine urine for albumen & sugar. Examine eye &c. Amaurosis may occur in gravid women without renal disease

8) Mastodynia - Great pain in breast. Belladonna & opium plasters. Iodine Zinc &c. Common on right breast during pregnancy. Uses of emulgia

9. Blood & Vascular System

a) Exaggerated conditions of normal change - Excess of white corpus. albumen & red corpus diminished fibrine increased. Density of serum is diminished. Blood gives a large buff layer on cupping.

b) Enlargement of Thyroid - A little goitre is very common in gravid woman. Sometimes it gets very large & has even proved fatal by pressing on Trachea

(c) Disease of Spleen – Softening & enlarging of Spleen. May rupture (fatal) & produce hemorrhage also hemorrhages from uterus. Leucocythaemia. Give Iron &c.

(d) Varix – Respect below brim of pelvis, especially in those standing long on their feet during pregnancy. Varix increases during succeeding pregnancies. These enlarged veins get veins from pressure on brim of pelvis, but not from this cause alone. Hemorrhoidal veins, iliac veins (most commonly left limb is affected) veins at orifice of vulva. They become dangerous sometimes from ulceration occurring & perforating into veins which have become rigid & hence openings remain narrow & valvular action of vein is destroyed from this rigidity hence may gradually bleed to death. Externally this seems if cut a scratch to varicose vaginal parts. Patient should rest in recumbent position several times a day, with legs elevated so as to let veins empty several times a day. A elastic stocking bandage from toes upwards. Ergot sometimes useful

(e) Cardiac Disease – May occur in pregnant woman especially in those who have previously suffered from Rheumatism. It seems from increased amount of heart action from extra amount of blood, hence heart becomes slightly increased. Hence if the slightest affection of heart it gets just to a severe test at this period

& if strain be too much may cause Dilatation Stenosis
of compensation occurs pregnancy may go on, but great
abortion. Pulmonary system greatly gets interfered with
growing uterus in abdomen pushes up the organs before
it & affects all organs especially the heart. After abortion
occurs there is again a very sudden & great change &
hence another danger to weakened heart.
Dyspnoea - may occur from the above changes
Take care of the administration of Digitalis Strophanthus &c.
Avoid risk abortion in these cases. Give Antispasmodics
Blood letting in small amount often good.

3. Respiratory System

Amount of CO_2 is lessened in women from puberty to
the Menopause. Diminished during pregnancy & hence
may be disturbances of breathing
a Dyspnoea - It may be mechanical from uterus pushing up
& from physiological changes gives dyspnoea
Stimulants
b Coughs - Common Give Ether & HCN & may be opiates
in addition
c Haemoptisis - Sometimes occurs. Once thought that
pregnancy delayed phthisis. Now is disproved.
It for it often starts then, & may even run a very rapid
course there, but conception rarely occur in phthisis

Lecture 27th Oct. 12th /77

8 Diseases of the Generative Organs *25

(a) Vaginitis

(b) Oedema

(c) Leucorrhoea

(d) Hydrorrhoea

(e) Inflammations as in

Endometritis

Acute

Chronic

a Polypoidal

b Diffuse

Mesometritis

Acute - Chronic

Parametritis

(f) Abdominal Tumours

(g) Carcinoma

(h) Displacements of the Uterus

Prolapsus - Partial & Complete

Anteversion & Retroflexion

Causes - degrees - symptoms

diagnosis - Prognosis - Treatment

(i) Hernia.

*76

It Digestive & Excretory System

Pregnant women do not need to take any special diet & needs no change of mode of life. Benef. well to take a light meal at night before going to bed

(a) Disordered appetite - Depraved appetite - when a pregnant woman picks up & eats anything such as bits of chalk &c one woman would eat her husbands shoulder Do not prevent this & regulate diet (be established)

(b) Salivation - Benef. more or less in pregnant. Sometimes as excessive as if from Mercury, but it differs in gums not being spongy & no blue line on gums & goes on more or less during whole time of gestation. It interferes much with mastication & digestion. No proper treatment for it. Such as Potash Chlorate can be

(c) Nausea & Vomiting - Almost universal as morning sickness. Some say it is a salutary phenomenon Comes on in morning with first abeyance of post menstruation 1st about 3 month of gestation. Sometimes continues all day & stomach rejects all food & there is a constant distressing sickness. Ingesta & secretions of stomach as bile vomited Or may be vomiting of blood (Hæmatemesis) from ulceration of stomach, coffee grounds vomiting. It is extremely intractable the vomiting & sometimes being fatal even before the 3rd month

Causes - Sympathy of stomach with uterus. Morbid states

of stones or congestion or inflammation of fundus of uterus, displacements of uterus are all causes also. Sometimes cannot find anything to cause it

Treatment - Sometimes an exhaustive to cervix. But principally by diet & regimen. Keep intestinal tract well open as by Carbon Bd Soda Powders to Stomach sedatives as Bismuth alone or with Rhubarb & Soda. HCN alba alone or with Bismuth. Exclude of Cerium. Salacin Mineral Acids as Phosphoric & Nitric. $AgNO_3$. Always see if Iodine in 5 drop doses. Always require sinapisms or blister over stomach. Or liniment (sedatives) over stomach. These are for very serious cases. Give food in very small quantities but as frequently as possible. Try & maintain strength like woman tides over period of sickness. Injections of nutrient. Soda & Potash water. Brandy. Unction of Oil into skin. When Vomit becomes in great danger must bring on Abortion, but this is not absolutely free from danger hence be very cautious & always call in another practioner

(d) Heartburn, Cardialgia - Most frequent towards end of gestation. Sometimes along with Dyspepsia, getting quantities of sour hot burning fluid up. Dont let meals be heavy & not too long between. Antacids - as Soda, Carb, Bismuth & Cerium, Lime water &c

(e) Diarrhoea - From long continued indigestion. Give

lime water & boiled milk, chalk, Dovers Powder to 10 percent Nux
7) Constipation - common. that may lead to packing up
of solide matter & leading to straining, nausea
vomiting, piles &c. Have bowels opened regularly & avoid
thus condition. Regular exercise. Of vegetable diet, brown
bread, figs tamarinds prunes &c. & avoid much flesh.
½ pint of cold water night & morning, or a cold compress
to abdomen for about 2 hrs in the morning, both often
useful to stimulate bowels. Injections of soap & water.
Confection of Senna. Warm paste for Piles. Ox gall.
Castor Oil. If habitually required use something simple
like liquorice powder
B Local Affections
Jaundice - Two forms.
1st - In late weeks, from encroachment on
liver bile stains & passes away after labour. Not serious
2nd - In earlier weeks - Acute yellow atrophy of
liver. Very serious. Constipation. Tingling of skin. Coma
& Convulsions. Vomiting mucous bile & coffee grounds.
Bloody stools. Urine dark like porter & deposits bypoxan
& Leucin. Hepatic dullness progresses day by day.
Very fatal in pregnant women. It occurs more in them, from
retention of bile acids in blood, these should be eliminated
by kidneys, but in pregnancy there is 1st impeded circulation
hence impaired secretion through kidneys 2nd the blood is also more

hydraemia already & both act in her cases.
Sometimes patient does not about before death. Etc medicine to stop. it as yet found. Use purgatives & diuretics in 1st stages. If diarrhoea Dry mucoid acids & quinine use for vomiting & counter irritants to skin.

C Urinary Organs

Renal secretion often modified sometimes diabetic towards close of gestation.

Sometimes Albuminuria, but not great till about middle stages of pregnancy. It may be due to growth of uterus affecting action of kidneys from its mechanical pressure & it is hence more common in Primipara. It may be from nervous connection between kidneys & sexual organs. Any previous slight affection of kidneys becomes more developed by pregnancy & thus it may prepare the way for mischief.
It may be a hysteric albuminous condition of blood as the cause

Lecture 2nd Oct. 17th 1878

5 Effect of Epidemics Diseases - Pregnant women are as liable to them as non-pregnant woman though some say otherwise.

a. Influenza - Not dangerous. Is usually common in both pregnant & not.

b. Cholera - Pregnant women often about through it, & more of these recover than those who don't about. But still Abortion should not be practiced in Cholera for hemorrhage may be fatal, & in those who don't about it is great because cholera is so rapidly fatal in them

c. Typhoid, Typhus & Relapsing Fevers –

1. Typhoid – No more dangerous than in unimpregnated state. Spon abortion caused, even by S.P.C. about. Increase of heat sure increase action of foetal heart, fatal to child if temp of 104° F be maintained for sometime though mother may recover. Danger to child may be due to fever or to excitation of Uterus.

2 Typhus – often abortion. Not so fatal to foetus as Typhoid though.

3. Relapsing Fever – Dangers are abortion & hemorrhage as before

d) Small Pox – Pregnant as liable as non pregnant unless been vaccinated or had S. Pox before. In most cases abortion. Causes not well known causes, Maternal – (1) Poison in blood excites non striped muscle of uterus to action just as Ergot would (2) Special tendancy of uterus to hemorrhage from poisoned blood, if in early stage into the Decidua; if in later stage of pregnancy into placenta. Foetally – Uterus may be affected due to the uterus & disease may be more intense in child than mother, especially she has been vaccinated. Child is aborted with S. Pox marks on it. Or it may survive S. Pox in utero & be born marked, it may then be insusceptible of vaccination. Sometimes child has S. Pox immediately after birth. It also seems that a child may be born with S. Pox & still its mother not be affected. Also one of twins may be affected & not the other. Child may infect mother & mother the child. Protect pregnant women during epidemic by vaccination

e. Rheumatic Fever – May attack pregnant women. Etc may be a previous sort of pains. Most marked in puerperal women. Need perspiration. Use alkalies, opiates, Doris powder &c. Wear flannel next the skin.

f. Syphilis Exanthems – Common. Very grave to mother. Frequently

abortion & fœtus often non viable, if it is genl. born unhealthy & ill developed If disease be latent child may be born healthy, but it may at any time after exhibit syphilis. Not so marked a tendency to inoculation if mother be infected during pregnancy, but child may be inoculated on its passage out at birth from abrasions &c or if it be suckled by its mother. A child may be born syphilitic from the fœtus & the mother be healthy. In these case give Mercurials as Perchloride or Biniodide followed up by Iodide of Potash & also the Chloride

§ Diseases of the Generative Organs

a. Pruritus – Some aspect. liable to it. Affects Vulva & adjacent parts Remove any irritating discharge. Attend to bowels & vaginal. Injections of astringents. Use Valerianate of Zinc, Bromides, Nux Vomica. Use $AgNO_3$ Cold or hot baths. Tobacco infusion. Bismuth & Borax & Zinc & Mercurial Ointments & Lotions. Glycerides of Carbolic Acid. Frost washed parts, then spreading Ung. or lint applied on & between the Vulva. Don't puncture may cause Erysipelas. She must not scratch or rub the parts. Rest.

b. Uterus – Of Labia may almost become Inflamatory. Perfect Rest. Don't puncture for fear of Erysipelas

c. Leucorrhœa – From Vagina Cervix &c. Use Cleanliness & Injections.

d. Hydrorrhœa – In drops or gushes. Clear, yellow, or tinged with blood Peculiar to gravid woman. Some say due to escape of Liq. Amnii, but due most frequently to Morbid Conditions of Decidua causing thus a Chronic Catarrhal Endometritis. Treatment – Only Rest & Regt of Gord.

e. Inflamation of Uterus – 1st & Endometritis – This may be Acute or Chronic Chronic may be (a) Polypoidal in which Decidua is so thickened & then may be abortion; or Chorion may be degenerate & fœtus dead. Or

c.) may be Diffuse, when bowels may become Cystic. Sometimes traceable to Syphilis or Previous Inflammation of Uterus. 2nd Pericystitis - Sometimes this Pericystitis Parametritis Inflammation has been observed but not at all certain, most common in cases of Retro-Flexion. 3rd Perimetritis - May also occur.

f. Fibroid Tumours - Will be considered after

g. Carcinoma - Rapid in growth. May cause abortion. Dangerous

h. Displacements of Uterus - 1. Prolapsus, may be partial or complete Uterus may lie on floor of Pelvis or even hang out of Vulva. It may occur suddenly during gestation, often an effort, up to the 4th month. Uterus is too Miscarriage often. Generally patients have suffered from it previously. If low in Pelvis, it has not room for development & hence frequently abortion occurs. Use Prophylactic Treatment. Escape Uterus must be pushed back, by pessaries Pillows of bran & sphagnum, bandages &c. Attend to bowels & bladder. Use astringent injections. Rest. Uterine Tonics. 2. Ante-version & Flexion - When pendulous belly tends to fall forwards from relaxed abdominal walls. It is very distressing & dangerous. Rest in recumbent position

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Pelvic Uterine Gestations Varieties

I Ovarian II Abdominal III Tubal { a. Tubo-Ovarian / b. Tubal Proper / c. Tubo-Uterine

Pathology - Symptoms - Diagnosis - Prognosis

Terminations to Pelves

1 Escape through the natural passages

2 Passes into Abdominal Cavity

3. Does & leads to Suppuration becoming discharged through:
a. Abdominal Parietes b Intestinal Canal
c. Urinary Canal d Genital Canal
4 Does & becomes encysted (Uniporcular - Multiporcular)
Treatment - 1 Palliative & Prophylactic. 2 Tapping the Cyst
3 Gastrotomy in cases of rupture &c after 3rd month
4. Assist in Elimination of Fluids.

Diseases of the Ovum
& the Fœtal Appendages & the Chorion
Myxoma - Hydatiform degeneration
Pathological Anatomy - Etiology - Symptoms - Diagnosis - Treatment
2 the Amnion
(a) Defect of Liq. Amnii
(b) Excess of Liq. Amnii - Hydramnios
Causes - Symptoms - Diagnosis - Prognosis - Treatment.
3. the Placenta
(a). Myxoma (b). Cystic Growths (c). Apoplexies (d). Inflammations (results) (e). Calcareous degeneration
4 the Umbilical Cords
(A.) Convolutions (B.) Knots (C.) Torsion * 27.

Displacements of Uterus (Continued)
3 Retroversion - by more consequence the Ante versions. (as may be above level of pubes. In Retro versions axes of os & body of uterus are in same line, both in

Retro flexion the two axes are at right angles. May be a combination of both.
Rarely causes distress before 3rd or 4th month. Rarely causes difficult labour.
Sometimes been displacement before pregnancy. Often causes Sterility. Often
gets rectified by progress of pregnancy, if not its symptoms are aggravated.
Possible for Uterus to get displaced during Pregnancy as from over distended
Rectum or Bladder, a fall, straining at stool, or vomiting.
If you find it in different degrees, sometimes only slight & easily rectified. At
other times Post. Wall of Vagina may protrude at V ulva
Symptoms - Pain in Pelvis radiating to Thighs, disturbance of bowels as constipa-
tion. Lower distension of bladder (from pressure) causes great distress. Retention
of Urine during Pregnancy is as a rule due to Retro-version. Urine may
dribble away. Can feel distended bladder above Pubes. Pass a gum elastic
Catheter (not less than ⌀ No. 9) After emptying the bladder the position of
Uterus is more evident. Sometimes scarcely accessible to the finger.
Prognosis - Favourable if seen early. If long a trouble, inflammation of
the bladder may ensue, & lining membrane may become detached
from fundus downwards & blood & pus collect beneath it. In some
cases the Bladder has burst & bad urine gets into peritoneum. The
bladder & uterus getting engorged with blood become soft & friable &
lose their activity, as well of parenchymatous metritis. May be slough
ing & abscesses. Wall of Vagina may get torn through & the Fundus
exposed at the V ulva. If bladder has been distended 4 or 5 hours let
from progress be very guarded.
Treatment - Empty bladder with Catheter & empty Rectum & Spontan-
eous rectification may occur. If not, place patient on her

hands & knees in that Fundus falls forwards, & bottom finds Post. wall leaves so as to admit a column of air. If it fails, try & replace by the fingers passed into the Post. Fornix assisting with the other hand externally. Push Fundus up & to one side so as to avoid Sacral Promontory, best to right side for Rectum & Colon is on the left. Next try for Rectum. If you still fail operative the patient & let her rest some hours & then try again. Replacement always possible. Prof. Simpson never seen it impossible. Sometimes Fundus is irreplaceable from adhesions. In such cases must empty the Uterus. Pass a bougie, rupture the membranes, or allow sound or bougie to remain in till labour starts. Will to give Ergot. In some cases, the Sound cannot be passed, then use the Aspirator passing it through uterine walls at right angles & draw off Liq. Amnii & this is followed by expulsion of Uterine Contents. The Wound is not dangerous.

Lastly, displacements of Uterus & its Appendages through Umbilical or Inguinal Rings &c. Only Curiosities

(i) Hernia - Ovary. Chloroform. Pelvis Bandages &c.

Extra Uterine Gestation

Uterus proper seat for Ovum & its growth & expulsion, but it may rarely get lodged in other positions of different varieties

I Ovarian - In Ovary itself. Doubted by some, but cases known of it.

The ovum gets impregnated before its dehiscence, by the Spermatozoon getting into Ovary. It is there provided a proper sinus viz: post vascular tissue into which the Chorionic Villi may pass

II Abdominal, Ventral, or Pelvic - Ovum gets into Pelvic Cavity in Pouch of Douglas, sometimes above but usually below brim of Pelvis. This is a primary form occasionally, but is generally secondary, thus Ovum may get impregnated in Fallopian Tube, enlarge there, & burst through into Peritoneal cavity. The Placenta attaches to Peritoneum. Very Rare.

III Tubal - The most common variety. Three positions :- 1. Tubo-Ovarian - Ovum between Ovary & Fallop. Extremity & being kept there develops. 2 Tubo Proper - in which Ovum develops in some part of Fallopian Tube. 3 Tubo-uterine - Most rare. The horn of uterus may be the seat of growing ovum, & the horn may not be connected with the Uterus at all. In some of these cases noticed the developing ovum was found in one side of Uterus & the ovisac from which it had escaped on the ovary of the opposite side. Been discussed whether the motive power lies in the Ovum, or it is pushed in the direction indicated by the cilia. Some even assert that there is even internal wandering of Ova from one Ovary to the other. In the one horned form of uterine pregnancy there has usually been previous inflamation Some deformity of Tube & Ovary may have had to do with this state. Even twins have been found in Extra-uterine Sacs.

Symptoms - Same as those of Intra uterine pregnancy. Menstruation ceases. Great Pain is most marked symptom. Take a Tubal case, the Ovum grows till it cannot be accomodated in the Fallop. Tube bursts & hence may cause hemorrhage. May not be able to distinguish it till 4th or 5th months & then with difficulty for Uterus is pushed on one side & you are afraid of using the sound lest it

should be a normal pregnancy. Exact position of swelling is most reliable point, laying aside the use of sound. Case gets quite clear at full term. Rupture of Tubal cases generally occurs early, but may run on to full term, but the foetus then gets into Peritoneal Cavity.

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sometimes large effusion of blood. Foetus may develop till full term of labour, but it is shut up in a closed sac. The child usually dies at or about this time. It acts like a foreign body in abdomen & may cause Acute or Chronic Peritonitis & may be death

Terminations to Foetus - May go on to full term, pains come on but no births be some instead of rupture of sac Foetus may get encysted in abdominal cavity, & in one case the woman became pregnant & bore a healthy child, yet the extra uterine foetus remained encysted & quiescent, she died from inf. flammation in a subsequent pregnancy. In another case a woman carried an extra uterine foetus 50 years. The dead foetus may be discharged through the natural passages or into abdomen, there it breaks up being discharged piecemeal with pus through Abdominal Parietes, Intestinal, Urinal or Genital Canals. It may undergo softening or Calcification Ossification or Lithopaedion. These cases are very dangerous

Treatment - If Conclusion be recognized early may be (1) Delicate & Expectant. (2) Some take the ovum & fortunately the diseases with which it may be confounded such as Tubal Abscess to are also best treated that way. The foetus dies & expt withers. Some cases have been successful from some inject Morphia to hasten death. Electric machine in one has been used.

If fœtus has already burst into peritoneum & there is excessive hemorrhage give Iron, Ergot, Digitalis, Opiates, ice to abdomen & rest patient, Brandy & Ammonia to prevent Collapse. (3) If more advanced than 3 months have recourse to Laparotomy, in which fœtus is removed by opening in through abdominal walls in through roof of Vagina. Sometimes this has been done before the cyst has burst. Fœtus may die & be sweed. Mother's chances is very unfavourable. It is best not to remove Placenta, as is not to cause hemorrhage. Leave the end of Funis projecting through the Wounds, let placenta shrivel up & be expelled under Antiseptic Protection. The Balsamo Canstic Hoffe has been used in Vaginal Operations to prevent bleeding. The unfavourable cases are those in which fœtus dying, suppurates & abscess forms in abdominal wall & is shut off from Peritoneum by Adhesions.

Diseases of the Ovum.

Of the Fœtal Appendages – 1st. Of Chorion –

Myxoma – Cellulose or Cystic swellings on surface of Chorion. Called also Hydatiform degeneration. The epithelial covering of chorion

Pathology – & its Villi send its Buds out in all directions, cysts form and stems & extremities of Villi. Smaller cysts contain a glairy liquid, which is still more fluid in Larger cysts. From the extremities of these grow other cysts until they become very abundant. Cysts may be as Large as a grape. If Ovum early then the whole surface of Chorion is affected, but if at a later stage, it is there confined to a smaller area "Chorion Frondosum"

Cause – Not known. May be due to morbid condition of ovum itself or of membranes or from irritation of maternal fluids. That it is due to fœtus is proved by co-existence of a healthy ovum & a hydatidiform ovum. The col-

elevated anatomical Peculiarity was born thus. Sometimes due to Morbid State of Mother's Blood as there may be a healthy foetus & a diseased Placenta. The ovum thus diseased is called a "mole" & may be thrown off alone, or in twin cases be born with an healthy foetus. If the degeneration be localized foetus may survive, but if general it dies & is expelled degenerated. Ovum may grow for a varying time. May be 6 months. Symptoms - Uterine discharges usually bloody or tinged with blood & escape of fragments of degenerate chorion. Examination of uterus reveals a larger body than is to be expected at this date (6th month). On combined examination body feels doughy & resistant. If os is very patulous you may feel mass with your finger, & on its expulsion it looks like a mass of whole currants floating in red currant jelly. Cysts may be of any size from microscopic to grape size. There is a peculiar form in which cysts grow into muscular wall of uterus & into its venous canals till they lie just under the peritoneum. In some cases may even perforate uterus & pass burst into peritoneum & cause death by hemorrhage &c. When whole surface of Chorion is thickened it forms "Diffuse Uniformal" which is rare

2nd C of Amnion - A. Defect of Liq. Amnii - This is a most dangerous condition for child of foetus may get adherent to Amnion from want of Liq. Amnii to keep them apart. Perhaps the Inflammatory Forms are referable to this, in which there are these adhesions & bands stretching from Amnion to Foetus. These bands may constrict the Foetus at some part, or amputate a limb, or cause its death. Often in such amputations fingers & toes out from end of the stumps.

B. Excess of Liq. Amnii or Hydramnios - Usually associated with

Malformed Conditions of Fœtus or Fœtal Membranes, or Dropsy of Mother.

Prof. Simpson has seen it in cases of imperfect development of fœtus, skull will open fontanelles & Spinal Column open. Also in a case of Spina Bifida in which there was a communication between Cerebro Spinal Canal & Vag. Canal. Most frequent in Multiparous females, 25 to 5 Primiparæ, & more frequently in girls than boys, 25 girls to 8 boys. May cause abortion about 6th month. Most manifest about 5th month. It may greatly distend the womb so as even to press upon bowels, stomach & diaphragm & thus cause great distress

Diagnosis - Parts of fœtus not easily felt & large quantity of fluid to feel. The uterus not bi-oval as it should be. Ballotment give a peculiar feeling in the hand. Prognosis - Not dangerous. Be cautious at labour

3rd Of Placenta - Anomalies of it as to size soon be already discussed.

A. Myxoma - A thickening of Placenta just same condition as of Chorion.

B. Cystic Growths - Frequent & generally towards fœtal surface. Unimportant

C. Apoplexies - Are more important. Hemorrhage may be entirely in maternal structures separating Placenta from Uterus. We consider here hemorrhages into the substance of Placenta, commonly in groups. Different conditions at different parts, one part may be very thick & no section may find a recent blood clot. At another part may find discoloured blood clot with its centre softened. At another part, blood clot entirely decolorized & fatty degeneration of it & function of affected portions of Placenta entirely lost. The blood is partly in the pre existing caverns of maternal placenta, but not always so. May be a more thrombus. But structure may be torn & blood infiltrated into tissues.

Causes - May be from Inflammatory changes in Placenta, Placentitis. Some are predisposed to it. It may recur in same woman

D. Inflammations - Maternal or Fetal.

In Maternal - May be Intralobular or pervade whole of the placenta. Cells multiply & there is thickening which constricts the necks of the Villi & thus placenta may lose its function. It may be situated more on the uterine surface of placenta & lead to adhesion of placenta difficult to separate at time of birth. These changes begin especially in Connective Tissue round about the blood vessels, causing them to be thickened & constricted & thus cause Hyperaemia & Effusions of Blood into Placental Cavities. In Syphilitic Conditions, the Foetal portion is mainly affected with gummatous deposits, leading to thickening of parietal plate. Confined to Maternal portion & may pass down into trabecular layer. If Ovum be fertilized by syphilitic father then inflammation may be more manifest in Fetal portion which is black & granular under the Microscope. Fetus dies for want of nourishing. In some cases the Fetal Portion becomes swollen & oedematous. Looks like fatty degeneration, but is not so. Pale. Finely granular under glass.

b. Calcareous degeneration - May be in extremities of blind villi.

Little calcareous deposits. Also found around Fetal aspect. Not of any great importance.

4th - Of Umbilical Cord - Convolutions. Knots. Torsion. Sometimes changes in the vessels as well. Professor Simpson has seen one case which had resulted in death of fetus from an effect of Umbilical Cord.

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Interrupted Gestation

Abortion & Premature Labour

Before 6 months = Abortion

After 6 months = Premature Labour

Causes :- A. Fatal - on the part of the Ovum

B. Maternal -

a. Local :- 1 Morbid conditions of decidua

2. Diseases, displacements & injuries of the Organ

3. Morbid state of surrounding parts.

b. General : 1 All causes of depression of general health

2 Fevers & all acute diseases

3 Shocks

Symptoms :- 1 Contractions & Pains

2 Hemorrhage & other discharges

Diagnosis - Prognosis

Treatment :- A. If abortion threatens

B. If abortion certain { 1. Mitigate Pain
2. Restrain Hemorrhage
3. Procure complete removal of Ovum

After Treatment :- 1 Discharges to be checked

2 Patients health to be restored

Treatment in subsequent pregnancies

1. Diet Dress Exercise Rest

2. Remedy Anaemia Plethora or Syphilis

3. When predisposition exists, administer Alkaline Salts

Table showing Period of Pregnancy at which abortion occurred in 602 cases relative amount of still born & living children & no. living at a month after birth.

Period of Pregnancy at which abortions	Number of births	Still Born	Living	do living at the end of a month
2 months	35	—	—	—
3 "	275	—	—	—
4 "	114	—	—	—
5 "	30	—	—	—
6 "	32	24	8	—
7 "	55	28	17	3
8 "	28	23	5	1
Total	602	85	30	4

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Abortion & Premature Labour

Some consider as abortion up to 4th month & miscarriage afterwards. This distinction is of no value. Abortions occur in the proportion of one to three of full time labours. Out of 2000 cases of abortions 3rd P. Lent were under 30 yrs old. There are many abortions without either woman or practitioner knowing, for instance she may become pregnant & it may be discharged as a clot at 2nd menstrual period. Tendancy to abort is more marked in older women. Only 8 out of 64 women who lived to menopause had not aborted. Most abortions occur at 3rd months, next at 4th months, why there is difficult to say. The Placenta takes on its most rapid growth at 3rd month & hence more liable to hemorrhage after.

Causes:- Fetal or Maternal. Some have said it may be due to paternal influence, but this is rare.

A. Fetal - From all the diseases of its appendages already mentioned as of ovarian Cholera, hydatiform degeneration, unsightly attachment of funis & its diseases, torsion &c leading to death of foetus. Also from

diseases of foetus itself as Small Pox, Syphilis, as it may die from injury or shock. When death of foetus causes it the abortion is not immediate, not till changes had gone on in foetus. Circulation in foetus stops. Hence coagulation of blood in foetal portion of placenta & degeneration of surrounding textures, there acting as a foreign body are expelled with uterine contents. Immediate abortion is more common when there is much hemorrhage

B. Maternal: — (1) Especially diseased states of Endometrium from a. Local — tendancy to extravasation of blood, thickening & other morbid states of Decidua. (2) Diseases of Uterus itself as Metritis Cancer of Cervix, Displacements of Uterus, from falls or sudden pressure of any kind very probably from consequent hemorrhage. (3) from Wounds &c. 3 Morbid Conditions. Anything hindering growth of uterus as Peritoneal Adhesions Ovarian Tumours &c

b. General — 1. Anything which depresses general health, as excesses of any kind, Excessive Anaemia, Syphilis. Abortion common during famines. 2. Fevers & Acute diseases. Zymotic fevers, Pneumonia &c. 3 Shocks as from some strange maternal nervous impression. Strong mental excitement. Abuse of nervous stimulation. Tendancy to recur in such cases. Distinctions have been made as to Remote & Immediate Causes. Immediate abortion usually due to Maternal causes as from a fall or a blow. Remote more usually occurs from disease of the Uterus or its appendages, when any slight cause such as a jump from a chair, laugh, lifting of arms erect &c may cause abortion. There are 3 symptoms when it occurs

Symptoms :- (1) Some slight degree of hemorrhage first, with contractions & pains which are to be distinguished from inflamatory pains by their intermittent character. (2) Soon or a later there is hemorrhagic discharge which is often the first thing noticed. (3) In addition pieces of membrane, clots, & portions of fetus & in later abortions there may be grushes of Liq. Amnii. The Ovum may escape as a whitish body & be covered with the decidua reflexa & besides, the inverted Decidua Vera. You must make an actual physical (bimanual) examination

Diagnosis - Suppression of Menses. Combined examination & you can grasp the enlarged uterus. Don't trust to patients symptoms alone. Notice contraction & expelling of Uterine contents.

Prognosis - We have also to determine whether it is possible to arrest the symptoms & allow gestation to Proceed. For this notice (1) Hemorrhage - quantity. If slight & not continuous then try & arrest it (2) Pains - If slight may be arrested. (3) Physical Examination - Feel if abortion is actually occurring & Os & Cervical Canal expanding & the Ovum pushing down into its upper part. If on the other hand, the Os & Cervix be not expanded by the Ovum, then try to avert the abortion. Prognosis for mother is more favourable if abortion can be induced now, but it varies if the abortion occurs according to the complete emptying of the Uterus. Many women's complaints are traceable to aborting. They rarely terminate fatally, may be from excessive hemorrhage, like draining away before uterus contracts. Or it may cause great Anaemia & greatly depress the health &

cause disturbance to the digestive system. There are risks attending on imperfect uterine evacuation, such as recurring hemorrhage septic inflammations, & enlarged uterus & its consequent distress.

Treatment:— If Abortion threatened — Rest in bed. No excitement bodily or mental. Cold room & sometimes cold applications as ice if hemorrhage. Not too many bed clothes. Prevent or allay morbid contractions & for this prevent bladder & rectum being overloaded & irritating neighbouring organs, not by giving irritating purgatives but such as soups & water enemas. After their evacuation give a sedative or an opiate, as Chloral, Inj. Cpii bed, be or better an hypodermic injection of Morphia. If much hemorrhage give small successive doses of Ergot, for here we have a relaxed state of the uterine walls favouring the hemorrhage. Continue this treatment till there are no more signs of threatening abortion.

If. If Abortion certain — (1) Abrogate the pains, which is sometimes worse than an labour, by giving Opiates, Chloral, or Chloroform, not to stop the progress but only to relieve. (2) Restrain the Hemorrhage, as from this you might lose the patient. Rest. Cold Water. Ice. If all & repeated injections of Ergotine 1 grs. at a time in 16 min. of Solution. Sometimes more active means required. Plugging the Vagina, packing it quite full to distension so as to press upon the Cervix & Uterus itself. Do this with silk handkerchiefs, lint or cotton wadding, tow &c. It is far better to plug the Cervix by introducing a Sponge or Sponge tent, for it arrests the hemorrhage, dilates the cervical canal & directly excites the uterus to contraction & expulsion of its contents through the opened cervix.

And this is both better for labour & easier for the practitioner.

(3) Procure the perfect evacuation of the Uterus - Place patient on her back under Chloroform. Then pressing down the fundus of the left hand externally introduce 1 or 2 fingers of right hand through the Os & make sure to evacuate its contents completely. You judge of this from what has been discharged also. If beyond 3rd or 4th months you have often foetus, membranes & a ragged Placenta. If you are not certain of complete evacuation feel into the Uterus with 1 or 2 fingers & tear off & remove any attached portions of the Placenta. The fingers are far better than hooks or abortion forceps. In some cases difficult to push the fundus down from above & you often require assistance. Instead of Anaesthetist lay hold of anterior lips of cervix with abortion forceps & you can drag it down to V above & then insert your fingers.

After Treatment - It may be necessary to keep up the contraction

Treat patient by Rest &c just as in Peripneumia

Checking any discharges by astringents &c, & get up her general

health & so restore her former strength.

Treatment on Subsequent Pregnancies - A patient having once aborted

is very liable to abort again from the uterus having

been left in a weakened condition (1) Try & hinder this on subsequent

pregnancies by careful diet, prevent over exertion, don't let her

be on her feet too long at once, moderate exercise, no over exertion

nor pressure of clothes. Rest at periods when she should have menstruated

(2) Also treat general condition of her health by general treatment

as Iron if Anaemic. Mercury & Potassium Iodide if Syphilitic. Cod

Several, from Iodide of Pot. &c if Catechu (3). If a predisposition exists it is as well to put patient under a course of treatment for some time before allowing her to conceive. Thus give her Ultraline Salts, as 15 grs of Pot. Chlorate daily, throughout whole period of gestation. It tends to prevent death of child from disease of Placenta. It was thought from oxygenating the blood. But it is of great use though does not do this.

Christmas Holidays

Lecture 32 January 3rd ~ 1878

* 29.

Difficulty of Human Parturition

Why is parturition more difficult in the human female than in lower animals?

Alledged sufficiency of Nature in all cases of human parturition

1. Of mechan. strictly Physiological
2. Facility of parturition in lower animals
3. Facility of parturition in black races of mankind

Evidence of facility in lower animals

A - Comparative Anatomy of Pelvis

1. Rudimentary bones in Cetacea
2. A crescent or incomplete circle in Saurian reptiles & birds.

3. A complete circle with axis on nearly the same plane in quadrupeds.

Sexual pelvic differences in some animals
Relaxation of ligaments in some quadrupeds
Principal causes of difficulty in human parturition from pelvis & other peculiarities required for the erect posture for hence

II – Mechanism to counteract the Effects of Gravity

1. Difference in axes of trunks – pelvic brim, outlet – circle of transit
2. Oval form & large size of head of the human foetus & mode of articulation of spine.
3. Ovd – correspondence of diameters of brim & outlet
4. Promontory of sacrum & projection of coccyx
5. Rigidity of ligaments & lining of the pelvis & its outlet
6. Necessity of strong muscular power in the Uterus to overcome their impediments

Greater liability of the uterus & passages to physical injuries, irritations, inflamation & inertia

b – Peculiarities in Placental Economy

Greater mortality to mothers in Irish Labours
Dublin Hospital – Dr. Collins
Deaths of mothers in 11652 deliveries 1 in 106
deducting 36 deaths from Puerperal Fever, only

1 in 15 6 cases.
Deaths of mother in 240 twin cases 1 in 3 1/4, or nearly 1 3/4 greater than in single births
6) - Other causes of difficulty in human parturition
independantly of natural structures
1. Liability to disease of bone
2. " " " of uterus
3. Frequency of Mal Presentation
4. Susceptibility to Mental & Constitutional Influences.
5. Effects of civilized life & habits
Why is labour more difficult in the white races than in the black races of mankind?
Proof of its facility & safety. Exceptions
Supposed mechanical explanations
1. Cavity & outlet smaller
2. Foetal head smaller
Smallness of the head in the black races
Would smallness of the fœtus explain the difference?
Labours often difficult in black mothers when the father is of white race.

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Difficulty of Human Parturition

Some even aver that the function is physiological & independant of the skilled help of Accoucheurs. They ask us

To look at the facility of parturition in the lower animals. The process lasts from ½ hour to 1 hour in the mare, & from 1 to 2 hours in the cow. But we woman we don't consider it tedious till after 12 hours.

How do these differ?

There is a striking difference in structure of Pelvis, as in the Cetacea, where there are only two rudimentary bones forming the Pelvis & therefore no obstacle to expulsion of Uterine contents. In Birds there is an incomplete circle or crescent & hence no compression, their bones not meeting in front. In Mammals there is a complete circle, the axes of which forms a straight line but differs in different animals. In Bat circle is incomplete in front. In erect position there are different axes of trunks, hence easily & outlet of Pelvis. In human fœtus cannot act by gravity alone, as in some animals, but needs force. The ligaments of some animals may also relax to a marked degree.

In Human Pelvis the difficulties of Parturition are due to axes & completeness of circle of Pelvis. In lower animals axes of Pelvis is in a line with axes of Spine, but in human subject it at an angle with Spine to begin with & itself forms a curve with the concavity forwards Further the oval form and large size of head presents an obstruction to parturition. It is either spheroid

or vertex in human child. In lower animals it is conical as for example in the Calf which is born mouth first. In child the head is also larger than the trunk, which is just the reverse in the lower animals, in which the wedge shape gradually opens out the passages.

Moreover there is a difficulty in human parturition from skull being articulated near its posterior extremity so that some part of force transmitted through body of child is lost in flexing the head of the child to adapt head & trunk to axes of pelvis.

There is another difficulty in regard to relative form of head of child & of pelvic canal. The transverse diameters of child's head are shortest. The diameter of pelvis which is longest at brim is shortest at outlet, so that necessarily the child's head in its progress through the pelvic canal must rotate in order to adapt its unequal diameters to the varying dimensions of the Pelvis

In animals the pelvis is like a cylinder that is of a regular diameter, not so in human female.

There is also in human female a marked rigidity of bones & ligaments of pelvis. The rigidity being essential to the maintenance of the erect position. In lower animals weight is distributed to hind & fore legs.

There may be some slight relaxations of this rigidity, but abnormally the ligaments may be weakened to such a

degree that the woman is unable to walk (i.e. pubic ligaments) without a tight bandage round the pelvis.
Pelvis opens widely at symphysis pubis in some animals during labour as in seal, guinea pig, hedgehog. Sac ovar ligaments relax very much during labour.
Also in the female woman the sacrum & coccyx are bent forward, but not in animals.
In mother in woman the perineal structures are very dense & resistant from their position as floor of the abdomen these great difficulties requires strong muscular power to overcome their resistance.
In cow walls of uterus are thin, not thicker than those of the stomach.
In Whale, the uterine walls are as thick as the bladder. But in Woman uterine walls are ½ inch thick & this in itself forms an additional danger from tendancy to rupture of supporting structures. Also leads to great use of abdominal muscles & it also leaves the woman exhausted & weak & may cause powerless labours, also greater tendancy to low forms of fever &c.
Further there is difference in Placental Economy - In Woman there is a very intimate union between Placenta & the Uterus, between the Chorion & Foetus &c & when it is born it carries with layers derived from the internal surface of uterus & leaves as raw bleeding surface

on Uterus & hence dangers from hemorrhage, absorption of septic matter &c But in lower animals the placenta is quite easily detached.

There causes of difficult parturition independant of structure of Pelvis &c, as the various morbid conditions to which women are liable & from which the lower animals are exempt such as Rickets (or if present in animals there is not the same pressure on the pelvis depressing it) Osteo-Malacia &c Tumors in the Canal &c. Also no mental depressions & different constitutional states in animals

We must also notice the effects of civilized life. Thus in specially cultivated breeds of animals there is greater risks & danger in Parturition & we find in Mares Cows &c the more highly cultivated the greater is the mortality in Parturition. Thus greater mortality among Dairy Cows than in those breeding in the open air. So also in cultivating special breeds there is a higher mortality. All this is the same in woman, the more highly she is civilized, the greater the mortality.

Again labour is an easy process among black races & why should it not be among whites?

We have statistics of Labour among black tribes. Why should their labours be easier?

No explanations was first sought for in the greater size

of the Negro pelvis, but when this came to be investigated it was found that the Caucasian pelvis was both larger & more roomy.
Next the explanation was sought for in the size of the fetal head. This fact is true, the fetal child head being smaller than the whole child's head
Would the smallness of fetal head explain the difference of ease in Parturition?
To answer this we must investigate the facility of labour by its duration. The longer the labour the more the danger to both mother & child. The mortality of labour increases in ratio with the increase of diameter & greater danger to both mother & child.
When the head of child is large we find the labour is of longer duration. The male head is larger than the female heads. Now we find that there is always greater danger to mother & child in male than in female children. 1 in 23 males still born. 1 in 33 females still born. 1 in 78 of the boys die before 10 days, but only 1 in 120 of the girls
The male head is about is much larger than the female as if it had a towel wrapped round it
So in an average the male labour lasts about an hour longer than the female child

In Labour there are three elements always present
1. Powers or Forces bringing about result
2. Passages or Canals
3. Body to Passing.
Any deviation from the normal in these leads to prolonged difficult & hence dangerous labours
Duration is generally extended in first labours
In first labours the deaths of children are 1 in 19, & in subsequent labours 1 in 314. And mortality to mothers is 1 in 58 in first labours & 1 in 128 in multiparous females. This is due to canals being difficult of dilatation during first labours & often causes rupture of the Perineum.
As to powers & general constitution of Patients.
The process of Parturition is far safer in country women than in city women. Also the mortality of infants is greater in towns. Still births three as common in towns as in the country. 1 in 16 in Paris, but only 1 in 30 in the country & even only 1 in 20 in York and districts
When mothers are in circumstances of Poverty labour is more dangerous to them & the proportion of mortality to mothers in such cases is greatly increased.

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Usual Order of the Phenomena of Parturition

1st
1. Premonitory Symptoms
2. Uterine contractions & pains
3. Gradual opening of Os Uteri
4. Formation of Bag of Membranes
5. Rupture of Membranes
6. Full dilatation of Os Uteri

2nd
7. Descent of head into Pelvis
8. Formation of Peritoneal Tumour
9. Full dilatation of External Parts
10. Expulsion of Head & Body of Child

3rd
11. Detachment of the Placenta
12. Expulsion of the Placenta & Membranes.

The Phenomena of Parturition

Their Varieties - hence the necessity of a proper classification

Natural Parturition

A - Individual Phenomena of the first stages of Parturition

I Premonitory Symptoms

Their frequency - date - mode of supervention

Depend on preparatory changes in the passages & descent of the Uterus.

Consist of

1. Increased moisture & relaxation of Vagina &c
   Nature of the "Flows"
2. Subsidence of the Uterine Tumour
   Contractions in it &c
3. Sense of Respiration, Digestion &c
4. Symptoms of Pressure on the Bladder
   Rectum &c
5. Progression often more difficult though there is a greater aptitude for it.

Prognosis from such Symptoms - especially from the marked subsidence of the Uterine Tumour.

II Uterine contractions & Pains

Why used as synonymes?

Their relations

Occasionally contractions without pains, & pains without perfect contractions

Hence divisions into

1. True Pains

1. False or Spurious Pains

Causes & nature of False Pains

Treatment of Spurious Labour Pains depends on:-

(a). The Pathological State inducing them

(b). The fact of their consisting of irregular muscular contractions

Therefore

1. Remove the Pathological state exciting the Pains

2. a. Constipation or Retention of Urine
   b. Deranged stomach & Diarrhoea
   c. Vascular excitement, plethora &c

2. In all cases enforce the supine posture for a time at least

3. Afterwards if necessary suspend the irregular muscular contractions by Sedatives

Nature & forms of Sedatives employed

4 Before giving Opiates have the Bowels opened.

True Parturient Pains

Vary in character according to the Stage of the Labour

Varieties:-

"Throes". Grinding. Cutting. Rending. Dislocating. Bearing down. Expulsive.

Corresponding variations in the patients expressions

Immediate seat & Causes of the Pains

a. Compressed Pelvic Nerves
b. Compressed Cervix
c. Body of Uterus from contraction and pressure on its contents
Its own strong spasmodic contractions

Intermissions of Pains
Immediate Cause
Final Cause
Intermission less marked in first stages.
Interval lessens & duration of pain increases with advance of Labour

Respective Progress in Duration of Pains & Intervals.

Lengths of Pain	21	27	29	32	35	42	45 sec.
Lengths of Interval	15	10	10	8	7	6	6 min.

Lengths of Pain	47	49	55	62	93	seconds
Lengths of Interval	6	5	5	5	4	minutes

Parturition or Labour

In an ordinary natural labour there are three stages of the phenomena
Some make five different stages. Others make two which is a much more common arrangement. These include the Premonitory Symptoms as first stage & it includes Micturition also & so on
The stages are

1. Premonitory
2. Dilatation
3. Propulsion
4. Expulsion
5. Delivery

Others have formed four stages cutting off the Premonitory stage.
We follow Professor Hamilton's division into three stages

1st Stage - Up to full dilatation of Os Uteri therefore Preparation & Dilatation
2nd Stage - That of Expulsion
3rd Stage - That of Separation & Expulsion of Secundines

Individual phenomena of First Stage.

1. Premonitory Symptoms

May begin 2 or 3 days previous to labour, or

may be weeks or a month. Or they may be so gradual that none are perceptible to the patient till the Labour itself starts

They depend on Preparatory Changes in Passages & Descent of Uterus. The more pronounced they are, the easier the Labour will be. They consist in

1. Increased moisture & relaxation of the Vagina &c - There is a distinct increase of a whitish fluid, often flaky & sometimes purulent. This begins 2 or 3 days previous to Labour & immediately before Labour they may get streaked with blood & are then spoken of as the "Shows" The blood indicates dilatation of the Os & its laceration.
2. Subsidence of the Uterine Tumour - There is a certain feeling of stiffness of the Uterus from its blood vessels getting pressed on & congested, & fundus falls &c. This is a favourable symptom.
3. Irregular state of Respiration & Digestion &c - Consequent on the subsidence of the Uterine Tumour.
4. Symptoms of Pressure on the Bladder & Rectum - such as Retention, Incontinence, Constipation &c consequent on the descent of Uterus.
5. Progression often more difficult though a greater aptitude for it from the freeness of Respiration

recognise from these symptoms - If they be marked they indicate an easy Labour as probably the Pelvis is roomy.

These symptoms may go on for from 2 to 7 days or so & then comes on

II Uterine Contractions & Pains (Symptoms)

This stage is described by some as the 1st real stage of Labour.

In the great majority of cases contractions & pains do co-exist as may may be recognised by the hand of the practitioner laid over the fluxed uterus. But there may be contractions without pain & pain without contractions.

The contraction may not be so intense as to cause pain. There are very exceptional cases, in which the child may be expelled as painlessly as evacuating the Rectum or Bladder. But contractions without pains are very rare & are abnormal. Von Siessen told Prof. Simpson that he had seen several cases. Prof. Simpson has seen one especially so & others partially so.

It unfrequently towards the close of Uteri Gestation you may meet with

False or Spurious Pains

often cause unnecessary expectation & unnecessary watching for they simulate real Labour which they are not.

Causes of them are the following:-

1. Spasmodic, irregular, & partial contractions of the Uterus - As for instance in the Fundus
2. Spasmodic cramps of Abdominal Walls or Diaphragm

. Contractions of muscular walls of Intestine, or Gastro Intestinal "Colicky" Pains

Diagnosis of them:-

1. Date of Occurrence - True labour pains dont set in till term of gestation unless from some special cause, as death of the Foetus &c. But spurious pains may set in a month previous to labour. May be only the 9th menstrual period as yet come round.
Sometimes no cause evident but that it is time for the labour setting in.
2. Inquire further as to the cause of the Pains - Generally some condition exciting the muscular contractions is traceable, such as a long walk or prolonged muscular exertion, as a days washing, a long drive or being on their feet all day. Or may be from indigestion constipation of bowels, constipation, irritation of Bladder.
3. Regularity of Pains - True pains come on at regular intervals which gradually lessen, while the pains increase both in duration & intensity. Spurious pains are quite irregular, exist for some time & then pass away.
4. Situation & Site of the Pains - If patient has had a child before she may say that the pains are different to what she had before. True labour pains are first felt in the loins & passing round to the Pelvis forwards after. If pains are in Intestine Diaphragm &c, then there

vile is different.

5. Effect of Pains - If true pains, on placing hand over Uterus you will feel a complete, equable contraction of the whole uterus & a prominence of the Os. Per vaginal examination you will feel the lips of Os Uteri more tense & the bag of membranes more prominent.

If false the pains, you can't feel the irregular contractions of uterus & a few hard points externally, it does not get stiff & excel against the Abdomen. On per Vaginam Exam you feel no tension of lips of Os Uteri, & bag of membranes does not get tense.

Treatment of Spurious Pains

1. Remove the Pathological condition exciting the pains - Thus if Constipation give an Aperient as Castor Oil & Enema. If bladder is interfered with use the Catheter & use Camphor & Hot embrocation as Fedatives. If derangement of Stomach, there give an Emetic followed by an Aperient. If Diarrhoea, then clear out the intestines first & then give Astringents as Chalk Mixture with Milk & Lime Water &c. If Vascular excitement, Plethora as from standing too long, then place the patient in a recumbent posture. But if they are true pains we encourage the patient to move & walk about.

In all cases indeed you should enforce the Supine Position. Let the Patient go to bed, for Uterine Congestion is increased by the erect position, the the uterine veins have no valves

If in bed, still pains & no dilatation of Os Uteri stop the irregular muscular contractions by Sedatives as Opium Chloral Hydrate or Chloroform the patient. Give the Laudanum in not less than from 30 to 40 m. m. doses, if in a smaller dose it only makes the patient irritable & sleepless. Or give Opium Pills in 2 grs doses, or may give it per Rectum This mode is especially good if there is diarrhoea along with a Starch injection. Or may use Morphia Suppositories especially if any irritation. Occassionally it is best given hypodermically as Morphia Hydrochlorate. The Rectal mode of administration has the advantage of not exciting vomiting.

Always clear out the Bowels previous to the administration of an Opiate for they are apt to cause or increase Constipation.

These Spurious Pains may pass on into True Labour Pains Therefore see your Patient the next day or sooner

True Parturient Pains

may vary according to the stage of the Labour. They are phenomena occurring all throughout the process of Labour.

They vary in degree. They may at first be what the French call "Mouches" that is simple, flying, lightening like, coming & going directly. Then they worsen & get more grinding & more "bearing down", then more straining & expulsive in their action. They cause changes in the patients expression, & may often tell the stage of labour by it.

During 1st. stage - Breathing is free & patient cries out loudly during pains

During 2nd stage - She holds her breathe & bears down during a pain & at its close gives forth a cry rather of relief than from the pain.

Immediate Seat & Cause of Pain

Some attribute it to compression of sacral nerves. Sometimes during labour we have pain from such cause, but it is then felt in lower limbs. Some have sought to localize the pain in the lower Uterus which is the seat of the large nervous ganglia, so Madame Boivin said from personal experience, but sometimes they occur when cervix is not compressed as in Spurious Pains. Also there is pain after full dilatation & often after emptying of Uterus. The seat is rather the entire uterine parieties, not merely of internal surface against the uterine contents, but strong intense spasmodic contraction of the whole muscular walls of the Uterus & may be from compression of nerve filaments in muscles just as in Tenesmus due to strong intestinal contraction producing colicy pain

are similar to pains of cramps from involuntary compression.

Intermission of Pains:-

There is a series of interrupted contractions.

Causes:- 1. Some say interval is from the benumming of the uterine nerves by compression. Of ot so, for the contractions or pains get stronger & more prolonged as the labour goes on & we should just expect the opposite if the nerves got benumbed.

From Anemia of Muscular Wall from Contraction of the Muscles depriving tissue & Muscular filaments of blood. 2. But just the same objection as before holds good here.

Due to irritation set up in Uterus & transmitted reflexly or directly to Uterine muscular fibres - This is most likely. The amount of irritation supplied previous to contraction determines its severity & duration.

The interval lessens & duration of pain increases as labour advances as may be seen on reference to the table at beginning of this lecture.

It is important both for the mother & child that the pains should be intermittent. Were they continuous the mother would quickly get exhausted. It is important to the child because its circulation gets much depressed during each pain, also in the Placenta & therefore it needs the intervals for the restoration of circulation in Placenta Cord. Were this stopped it would quickly die.

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Gradual opening of the Os uteri
State & termination of Os Uteri at start of labour
Difference in the state of its lips in
a Relaxed moist & equable
b Them dry & irregular
Progress the more favourable the more they are
in the former state & the reverse.
Formation & rupture of the bag of membranes
formed by the segment of membranes exposed by
the opening of Os.
Shape of the bag a reversed segment of membr.
Progress when shape is irregular
Period of its rupture varies -
causes regarding it
Importance of ascertaining its accidental occurrence
Place of rupture of the bag - central & lateral
When transverse it forms a canal
The whole womb may be expelled without rupture
of the membranes
Degree of escape of Liquor Amnii
after dilatation of the Os Uteri
Mechanism by which this is
effected

a Contraction of fasciculus of fibres around incompressible ovoid.

b Mechanical action of fluid wedge formed by bag of membranes

c State of dilatability independent of either mechanical or muscular action

Proof - The first parts of the dilatation generally slower than the last part

Practical inference

Termination of 1st stage

Individual Phenomena of 1ceond Stage

The nature of the first stage principally dilatation
The nature of the 2nd stage principally expulsive
Alteration in the nature as in the object of the pains
Descent of the head into pelvis
Its varying height at the commencement of labour.
Modes of its presentation & descent
Formation of the Cervical Tumour
Lengthening & thinning of perineum
Mechanism of expulsion
Full dilatation of external parts
Their resistance - State of elasticity &c
Alternate progression & recession of the head
Its apparent succedaneum

Expulsion of head & body of child

Direction in which they are propelled

Partial rotation of the head at expulsion of shoulders *

Natural Labour

Three Stages

1st Stage - 1 Premonitory symptoms
2 Uterine contractions & pains
3 Gradual opening of Os Uteri
4 Formation of bag of membranes
5 Rupture of membranes
6 Full dilatation of Os Uteri

2cond Stage - 7 Descent of head into pelvis
8 Formation of perineal tumour
9 Full dilatation of external parts
10 Expulsion of head & body of child

3thord Stage - 11 Detachment of placenta
12 Expulsion of Placenta & Membranes

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Os differs in state of dilatation in multipara & primipara & also in its direction.

Lips of Os are thinner in primipara than in multipara they are thick & cartilaginous if previous inflammation

In quick labour they ought to be relaxed, smooth & equable. Slow labour of them dry & irregular

Formation of bag of membranes - Occupies whole inner surface of uterus. Lower part becomes expanded at os uteri where it hangs into canal of cervix. Thus possess little elasticity & uterus contracting gradually they hang down as a spherical or rounded bag when in the proper form. Sometimes this bag may hang through the vaginal canal & pass externally as a diverticulum & this generally indicates either a preternatural labour or a dead child

Rupture of the bag - Occurs at a varying period depends on (1) natural strength of membranes (2) the character of cervix uteri, as to whether it is soft or hard (3) on the presentation of the child

Should not to rupture the bag accidentally. It bursts at the point least supported. may be transversely or circularly. The water then escapes

Occasionally the whole child & are expelled without the membranes bursting. In these cases there is little or no water

The rest of the water escapes at the birth of child.

Full dilatation of os uteri - From 1 equal pressure of contracting uterus pressing around womb causes the lips of os to be drawn apart from action of muscular fibres. 2. The wedge like action of bag of membranes which is forced down into cervix

vagina & this goes on till it ruptures & for this reason we should not accidentally rupture the membranes for then there dilatable action is lost. 3 There is also a power of dilatability in the parts independant either of mechanical or muscular action, as proved by the first part of labour being slower than last part

Second Stage of Labour

The end of pains after being of a bearing down kind.

Descent of head into pelvis &c has to do with the mechanism of labour

Formation of cervical tumour - Perineum pushed forward and distended & thinned by head of child pressing on it.

The head alternately advances & retreats with the pains, the parts becoming more dilated each time

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Phenomena of Third Stage

Detachment of the Placenta - Its mechanism

Delivery placenta mucosa

Period at which separation occurs

Expulsion of the Placenta & Membranes
The inverted form in which they are produced
Mode of expulsion
Action of the Uterus & Vagina
The three Factors of Labour
1 The Powers 2 The Passages 3 The Product
Pictorial elements of 1st stage
" " " 2nd stage
" " " 3rd stage
The mechanism of Parturition
1st The Powers
Agency of the Foetus
Means for the Relief from retention
Births of children after death of mother
Objections to it in discussions on human reproduction
1. Uterus primary agent in the process
Proof of its strong contraction during labour
Degree of physical force exerted by it
Involuntary or Excito Motory
Its ganglionic character as a Basis
Reflex Spinal as a secondary
Observations & Experiments
Mode of Contraction
2 Action of Abdominal Muscles & Diaphragm
Opinions as to their primary influence

their accessory agencies in first & last stages
Obstacles to be overcome

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Placenta is detached by general contraction of uterus
There is no special muscle for doing this
It separates during third stage
There are three factors of Labour

1. The Forces
2. The Passages (1st. part 2nd head)
3. The Product (Uterine contents)

Actorial elements of 1st. stage - are lower part of uterus itself & the bag of membranes
Actorial elements of 2nd. stage - are the whole of the forces of parturition. To erase & to ext. vagina perineum & vulva & head & body of child.
Actorial elements of 3rd. stage - muscular fibres of uterus also accessory powers. Also placenta &c is forthrust.

Mechanism of Parturition

Formerly used that foetus was an active power. The case of chicks was instanced as making its own way out of the shell. Also some insects. Also Turtle But these have no resemblance to a child's birth which rather corresponds to laying of the egg than the hatching of it.

Again dead children are quite as easily born as living ones often except in cases where the child dies from the parturition being so difficult as from narrow pelvis &c when labour is longest.

Only influence of foetus is found its mere weight about 7 lbs. which assists it to gravitate down if mother be in an upright position

One further reason was births of children after death of mother

Uterus is the chief agent. Its strong contraction is proved by feeling it externally as from its contracting on hand when passed into womb, so as to even numb the hand. Difficult to estimate the amount of physical power it can exert, but it is indicated by its crushing head, rupturing the perineum & even rupturing itself. Force required is said to be from 20 to 80 lbs. It is said to require a force of from 14 lbs to 37½ lbs to burst

the membranes as shown by Duncan & others.
Action of Uterus is involuntary hence it acts independently of strength of woman, state of health, in coma, syncope & under anesthetics & even in some cases after death, & there are some cases in which the child has been expelled some time after death. Parturition goes on best when woman is in a cheerful state of mind, & the reverse in a reverse state. Pain may stop labour.
It has in itself a ganglionic nervous supply in connection with the sympathetic System which acts independantly of the Spinal Nerves as proved by an experiments with a frog growing head to spring in which the supply from Spine was cut off
When Uterus contracts its antero post. diameter lessens its lateral diameter increases & lessens in its perpendicular diameter. Tubes on it contracts circularly & not perpendicularly.
Voluntary action of abdominal muscles does not assist much tho' does the diaphragm though they were once thought very important. They have a marked important power in the 2nd stage & then greatly assist labour & it is said they can exert a force of about 32 lbs per sq. in. They greatly help on the head. They compress the uterus

uterine surface. Their loss is greatly felt in cases of paralysis of Head or disease of abdominal organs. In 3rd stage they also assist to expel the placenta & its membranes

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II Second factor of Parturition

Maternal Passages - Structure

The Pelvis

Ossa innominata

Sacrum & Coccyx

Obstetric Anatomy of the Pelvis

Two Cavities

1 False, or greater, or superior

2 True, or lesser, or inferior

Boundary Line - The pectineal & promontory of Sacrum

The True Pelvis

Brim or Inlet or Upper Strait - Cavity - Outlet

Diameters

Conjugate or Antero Posterior

Bisiliac or Transverse

Oblique or Diagonal (right & left

(Structure of Pelvis - Bones are Ossa Innominata, Sacrum & Coccyx (Coxae often is misplaced)

Configuration of the Pelvis

1 In the relation to the function of parturition

a Space of cavity carefully preserved by Nature

b Cavity increased by the shape of Sacrum & large size of the Obturator & Ischiatic Foramina.

c Protected state of the Anterior Sacral Nerves

d Deficiency of the bony parietes at either end of the oblique diameters

e Enlargement of the outlet from

1 Great size of the Pubic Arch

2 Mobility of the Coccyx

2 In relation to its functions as a protecting organ

3 In relation to erect posture & progression

Inclination of the Pelvis

Axes & Central line of the Pelvis

1 Axis of Brim

2 " of Cavity

3 " of Outlet

Importance of studying before Axes in relation to

a Progress of Foetal Head

b All Obstetric operations

c Position of parturient woman

Differences between male & female Pelvis

Changes from fœtal to adult pelvis
Pelvis with both Parts
Modifications of the False Pelvis
" " " True Pelvis
" at the Brim
" at the Cavity
" at the Outlet

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Anatomy of Pelvis - Bones are Ossa Innominata, Sacrum & Coccyx. Ligaments important are the Sacro Sciatic Ligaments

Pelvis:- Two parts 1 True 2 False

False Pelvis is part above the Two Ileo Pectineal Line. This part is not of much importance in relation to obstetrics. Its diameters are between the two Spinous Processes & should be about 9 ins. the other the Transverse diameter

True Pelvis is part below the Ileo Pect. Line. Three parts the Brim, the Cavity & the Outlet

Brim is also spoken of as the Upper Strait & also as the Inlet. It is somewhat elliptical. Its diameters are 4 1st Promont. of Sacrum called Conjugate or Ant. Posterior & is about 4 inches

Transverse diameter from two sides of Pelvis at Brim
is about 5 inches long

3 Oblique or diagonal diameters are two 1 run from
Sacro Iliac Synchondroses to Eminence Cavity they are
called the right & left diameter & are 4 1/2 in. long.

In Cavity - Transverse diameter lessens for sides slope
in. Antero Post. dia. in like than brim
increases on account of Sacrum sloping backwards. In
this part the cavity is nearly round & all its diam
eters about 4 1/2 inches long.

The Outlet - Lower Pelvic Strait - This part is very
distensile except in the transverse direct
ion. Its measurements are below 4 1/2 inches. This is
just above the outlet. At the Outlet itself the
diameters are just the reverse of those of the brim
the Conjugate being 5 inches the Transverse 4 1/2 inches

	Brim	Cavity	Outlet
Conjugate diameter	4	4 1/2	5
Oblique "	4 1/2	4 1/2	4 1/2
Transverse "	5	4 1/2	4

Depth of true Pelvis:- is 5 inches behind, 3 in. at sides
& about 1 1/2 in. in front at Symph. Pubis.

Configuration of Pelvis

1 In relation to function of parturition

a It must carefully preserve the cavity allowing

no projection inwards except the Coccyx
to Cavity is enlarged by shape of Sacrum & Os Innominata
II In its relation as a protecting organ
III In relation to erect posture & progression.
It receives the whole weight of Body
Pelvis at its brim has an inclination of 45°
Circumference at brim is about 11 inches
Circumference at outlet is about 12 inches

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Third factor is Parturition
The body passing
Foetal head
Regions, Sutures, Fontanelles, Protuberances
Measurements
Diameters of the Foetal head

Longitudinal { Occipito mental - 5 inches
Occipito frontal - 4 inches

Oblique { Sub bregmatic frontal } 4 inches

Transverse { Bi parietal 3½ in.
Bi temporal 2½ in.

Vertical { Trachelo bregmatic
Fronto mental } 3 inches

Measurements of circumference
Diameters of arch reducible by pressure
Moulding of head
Nursing

Opinions respecting the general direction in which the long diameter of the head enters the pelvis

1 In enters posterior diameter
2 In transverse "
3 In one of the oblique diameters
4 In the right oblique diameter

*3 4

Axis a central line of Pelvis

Axis of Brim - is represented by a straight line running at right angles to the plane of the brim

Axis of Cavity - Varies with movements of parts. It is represented by a curved line passing at right angles to its various planes. The central part of childs head travels along this line

Axis of Outlet - Also varies with movements. Female Pelvis more roomy than male. Male contracts downwards becomes funnel shaped. Arch of pubes in male is about 70° that of female 90° to 100° Male acetabula look more forward than female Hence are distinct differences even while undergoing

intra uterine life. The sexual organs are developed in the pelvis thus differing from male again the castrated Indian woman. The pelvis does not become so well developed as in other women.

Pelvis with Soft Parts - to be examined obstetrically.

Modifications of False Pelvis - It may be lessened from side to side

Modifications of True Pelvis - may be lessened by the overhanging of Psoas & Iliacus muscles & thus lessens the transverse diameter. Its Conjugate diameter affected little. Oblique diameters are seldom affected. Left Oblique may be affected posteriorly by the lower part of intestine entering pelvis

Modifications of Contents - The uses may be frequently altered by the various muscles & ligaments around them. The Pelvic perineal structures are greatly extensile

Lecture 3 of Year 1st. 1918

Third Period of Parturition

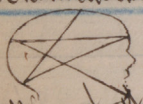
The body passing - Bag of membranes & liq amnii leaving first stage, then these burst & then the foetal head is the important body for it is the largest part of the child to pass therefore we must mainly consider the head as the 3rd factor

Head consists of:- Occiput & Parietal & Face & Summit of its head. Sutures - Sagittal or longitud

nal suture, Coronal suture is transverse & Lambdoidal suture transverse posteriorly. Fontanelles - Anterior is largest is Bregma; Posterior is smaller. 1st is quadrilateral in shape, but 2nd is triangular & the angle of occipital bone may be indented with the finger pressure because other bones overlap it. Sagittal fontanelle does not come into consideration

Vertex is a line in Sagittal suture nearer the Coronal than the Lambdoidal suture, & it is an area bounded by the Ant. & Post. fontanelles & laterally by the two parietal eminences

Measurements of foetal head - 1st Longitudinal - Occipito-Mental, from Occiput to the chin 4 inches, also Occipito-Frontal 4½ inches from Occiput to Glabella. 2nd Oblique - Sub Bregmatic dia., from below the occiput to the Bregma 4 inches or even less. Sub Frontal also about 4 inches



3rd Transverse - are Biparietal 3½ in. & Bitemporal 3½ in.

4th Vertical - Trachelo-bregmatic 3in. Fronto mental 3½ in.

Circumference of the Head round at the occipito frontal plane is about 11½ inches & that of the vertex is about 13 in.

Moulding of Head - Child's skull may be moved compressed from side to side, also in the longitudinal direction or from before backwards the base of the skull is fixed & incompressible. The compres-

son is not dangerous for it does not thus injure the ganglion at the base of the skull. Therefore the larger the head & the smaller the passages of mother the greater the compression. More in a male child than in female as head being 3/8 in larger in diameter. The head may thus become much moulded to the form of the mothers parts, hence the head may become very much elongated & there may also be caput succedaneum.

Position - What diameter of the pelvic brim will be occupied by the longest diameter of the head ex: the occipito frontal diameter? This has been greatly discussed. Some say in the conjugate dia. of the brim, so says Hodge. But this rule occurs very rarely & it is not now accepted as the position. Hence the occiput is not presented direct to the pubis. The occiput is presented in one to other of the oblique diameters generally. anteriorly. This the natural position as shown by Solayes. Then Naglé advanced on this saying that it is most frequently in the right oblique diameter. He also says that the head is also tilted to one side a little, this is the obliquity of Naglé. Sometimes the occiput is anteriorly & sometime posteriorly since there are two positions of Naglé

1st.	occiput forward & to left side	2nd.	occiput forward & to right side
2.	occiput backwards & to right side	1st.	occiput backwards & to left side

Table showing the position of the head in 3 & 91 cases of Cranial Presentations in the Heidelberg Maternity

I Occipito Anterior Positions	
1st P.- Occiput to left foramen ovale in	2. 262 cases
2nd P.- Occiput to right foramen ovale in	4 "
II Occipito Posterior Positions	
3rd Position.- Occiput to right Sacro Iliac synchond.	1 2 1 4 "
4th Position.- Occiput to left Sacro Iliac Synchondrosis	8 "
Total	3 & 91 cases

Ramsbotham makes 8 positions by going right round the pelvis & including transverse & conjugate diameters. Rejecting first said it presented in the transverse diameter & this is rarely a natural position. Solayres improved on his idea. It never passes in the conjugate diameter or direct antero posterior diameter for it is only 4½ inches while the childs head is five inches in diameter hence it could not pass in that direction.

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Division into direct & oblique positions

Head may present in two positions in each diameter

Anatomical reasons for exceptional cases

Nomenclature of the common oblique positions

Recorded variations of the relative proportion of anterior & posterior presentations

Reason for the first being more common than the second

Oblique position of the head at its entrance
Oblique position of head in relation to the plane of brim
What is the part which first presents itself in a natural labour?

a Anterior fontanelle
b Parietal or post. fontanelle
c Occiput
d Upper & posterior part of one of the parietal bones.
e Centre of the sagittal suture

Evidence from Caput Succedaneum from touch
Diagnosis of presentation & position
1 Palpation
2 Auscultation
3 Internal exploration, markers &c

Markers for ascertaining position of head By touch
1st Sagittal suture & its direction
2nd Situation of Ant. & Post. fontanelles
3rd If the Post. Font. felt, the diastemation of the occipital bone from the parietal by pressure
4th Ear, Parietal protuberances, Sutures

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Nomenclature of common Oblique positions are given according to occiput presenting to pubes or sacrum & being right or left dorsal thus.

Right	Occiput Pubic	Ant.
	Occiput Sacral	Post.
Left	Occiput Sacral	Post.

We have already spoken of the "obliquity of the ages".
What part of head presents itself first? Different writers have said different parts as the Ant. Fontanelle, Vertex, Post. Font., Occiput, Parts of parietal bones, but it is the central part of the Sagittal suture which presents & this is proved by the formation of a caput succedaneum.
Diagnosis of Position. - may be made by external palpation auscultation (foetal heart sounds) & most especially by internal examination. Feel for the Sagittal suture, pass finger along it, come to Ant. Font., tell it by its triangular shape, pass finger back again to Post. Font. can tell it by pressing of occipital bone which will sink below the parietals. also feel for the ears, & the occipital protuberances & also the other sutures. All assist in making out the position of the head

Lecture 39 Jany. 16th 1878

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Explanation of opposite movements of flexion & extension
Explanation of opposite movements of internal & external rotation

What part of the head first emerges from the outlet?
Various movements of foetal head in the process of labour
1 movements of descent
2 " of levelling or adjusting

I * 3 movements of flexion
II o IV " " Rotation
III * V " " Extension
IV o VI " " restitution = external rotation

Relation of order of occurrence

Name
Place
Cause } of each movement
Effect

Explanation of opposite movements of flexion & extension
Explanation of opposite movements of internal & ext. rotation
Degree of internal rotation in Occipito Anter. & Post. positions
N.B. In all positions the head should emerge with the face to the perineum & the occiput under the pubic arch
Proposed explanation of the Rotation
1 Foetal - Flexes backward
2 Maternal - Its pelvic muscles
Both the result of the form of the propelled head & the resulting passages
Proofs of Rotation
Explanation of the movements of restitution
Moulding of foetal head during its transit
Rotation in the head single & compound
Recognition of relations of head to pelvis from changes in shape of head.

Presentations not necessarily requiring assistance

1 Cephalic extremity } Cranium, face
2 Pelvic extremity including } Breech Knees & Feet

Presentations necessarily requiring assistance

3 Trunk or upper extremity

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Movements. 1 & 2. Descent & Swelling go on more or less during the whole course of Labour.

3 Flexion - Is the folding of the chin on the chest It is distinct to a slight degree before labour during 2nd stage of labour it is more marked. It may not occur if the pelvis is very roomy. It begins at the brim of the pelvis & increases after. It is caused by the spine being attached to head nearer occiput than chin & the pelvic contractions being equally depressed, the occiput being less recessed less resistance below than the chin end of head & hence the frontal part of head sinks back on chest or rather occiput gets in advance of it. Its Advantage - The direct longitudinal diameter of head being 5 it would just fit a pelvis of 5 and 1 scarcely pass through it, but by the falling which occurs by the flexion of chin it shortens the diameter or rather alters the occipito frontal diam. to the [illegible]

on the sub occipito bregmatic diameter which would pass quite easily

4. Rotation - Movement of head on its perpendicular axis in fact of whole body. It carries occiput from oblique diam. to under the pubic arch & the face turns into hollow of sacrum. It is called the internal rotation because it occurs in the pelvic cavity This movement varies in degree. Where occurring? - Some degree when first entering the pelvis, but really after flexion has occurred & the head has reached the pelvic floor when head starts to follow the curve of the sacrum & when it gets below Synaph. Pubis Cause - Caused great discussion. Yielding Horse thought it was simply due to twisting of child's neck. La Chapelle attributed it to Sterno Mastoid. Most writers consider it now to the Maternal muscles of pelvis, but this cannot affect much for these muscles are benumbed to allow of relaxation for passage of head. It is no doubt from configuration of pelvis & head adapting itself. The pelvis narrows from above downwards & if long dia. of head must occupy long dia of pelvis it must turn here to get under arch of pubis. The spines of the sacrum have a deal to do with the directing of this movement. Then again the rami of the Ischium & Pubis are rotated. Advantage - To

that it brings long dia. of head into long dia. of pelvis.
5. Extension - Reverse of. Flexion. Head gets thrown back & chin thrown up off chest. Where?
It seems when head is rather occiput gets up & some what fixed beneath the pubic arch, the front part of the head being still acted on & passing in the curve of the axis of the outlet. First the occiput emerges then the bregma, then forehead, then the face & after the chin. Thus undoing the previous flexional movement. This movement frees the head from the parturient canals.
6 External Rotation or Restitution - First the shoulders of the last & the occiput turns back towards the mothers left thigh. The trunk also rotates on its perpendicular axis. After exit of head there is great a little rest. But the next pains move the occiput round from middle line to the left side. Cause - The shoulders were entering with their long diam. transversely & obliquely & they must so as to bring the long dia. of shoulders in the long diameter of the vagina.
These are all the natural movements. Here are some deviations as in cases of contracted pelvis In all the occiputo Posterior positions of head there is greater likelihood of deviation from these movements

Lecture 40 Jan. 14th 1878

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Management of Natural Labour

General nature of the duties of Accoucheur in natural labour

Immediately obey the summons of the patient - Why?

Arrangement of mind. Dress Conducting the first labour

Information to be gained before examining

a. From the nurse

b. From watching the patient

Mode of conducting & performing vaginal examination

Selection of proper period during a pain

Purpose of first examination. To ascertain

1 If the patient be pregnant

2 If she be in labour

3 Progress or stage of the labour

4 The presentation

5 State of the Genital passages

Questions asked after first examination

Is everything right?

Beware of (in first pregnancies) sending into labour too soon

When will labour be over?

Danger in most cases of a precise answer

Circumstances regulating your subsequent attendance

Preparations & materials at hand

Obstetric bed, pallet, obstetric chairs

Modes of guarding the bed - upper clothes - dress
Position of the patient in bed.
When is the patient to be placed in bed?
Attention to state of bladder & Rectum.
Ventilation - Diet - Include - Cheerfulness
Prevent all injury & interruption to the natural processes

First Stage of Labour

1 To examine to detect existence of pregnancy & labour
Its progress, the presentation & the state of passages
2 Repeat the vaginal examination as seldom as
possible after first exam. & during the first stage
of labour.

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Moulding of the head - we have already alluded to it &
its distortion constitutes the sheaf which may be
on one or both sides of the head. We may recognise
the mode of progression the head has had from the
shape moulded on the head by the parts
Facial, Cranial, Breech, Knees, Foot are all
presentations requiring assistance.
Presentations of Trunk or one of upper extremities do.

Management of Normal Labour

Be at once on the first summons of your patient -

Armamentarium - Catheter, Stethescope, Scissors, Thread & tape, Chloral Chloroform & Opiates & Forceps & Speculum & Hypodermic Syringe, Wire for sutures. Perchloride of Iron, Syringe for injections into vagina.

Dress - In an ordinary clothes if not attending infectious diseases as you must convey disease.

Don't be in a hurry to get examining your patient. On your first entering the room probably the pains will cease your patient till she gets accustomed to you.

Enquire as to her bowels & bladder Get the whole history of her pregnancy. Enquire as to her past pains then you can tell whether it is first or second stage of labour. Pass your hand over the abdomen first.

When patients consciousness has worn off, give the nurse a hint & she will place the patient for your vaginal examination. Make your exam. during the continuance of a pain & probably she will think you are doing so to assist her

On first exam. ascertain first your patient is 1st Pregnant 2 In labour 3 Progress of labour, if waters have escaped, to what stage labour has advanced 4 Try & make out the presentation 5 State of the Os as to amount of dilatation may have undergone. Of course you

ascertain all this by inserting your fingers in the os.

Progress - From all the above calculate the probable duration of the labour &c for probably the patient will at once ask "you if all is right", if so tell her so & do all you can to cheer her.

If you are not certain of presentation, or it is not a natural presentation dont tell her, but if there is anything very unusual or dangerous make it known to her relations present or her husband & also be prepared to call in a consultant if necessary

If the pains are weak & the labour be long, the patient gets afraid it is not right. cheer her up of this. When will labour be over? Do not give a decided answer unless the labour is far advanced, for you may be mistaken & make a fool of yourself

If os is only slightly dilated it would be a waste of time to stay with her, as soon as she is only in first stage, therefore you may go but leave word where you can be found & tell them to send again if she gets much worse before you return again. Be cautious in leaving her if towards the close of the first stage & your examination again often stimulates the uterus to greater & quicker action.

If you stay in the house, there is no necessity for you sleeping by the bedside, you can retire to another room

& pass your time in reading to till you are required on further advance of labour

Let patient be put in the best & airiest room in the house & not be annoyed by any one in the room.

Preparations - Napkins, binder & dressing for child.

Obstetric Bed &c - Bed is used in Britain. In France on a small pallet from which she is afterwards lifted into a proper bed. In Germany they have special kinds of beds. In Holland the woman sat on the lap of another woman & so in some countries on the husbands knees. Also in Holland a chair was introduced & a well furnished bride carried from her fathers house to her husbands an obstetric chair. He showed us the kind of chair used in Calcutta & which the doctor carried about with him on his back. The best way is the good old British way: in bed Put some water proof stuff under the patient to guard the bed clothes. Dont let her have on many clothes unless she is cold. Turn up her dress over her pelvis. Oil your fingers on examination.

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3 In making the examination introduce your finger during a pain, but dont complete it till after pain has ceased.
4 Allow the patient to lie or walk about at pleasure till the Os Uteri is dilated to about 1½ or 2 inches.
5 After this period lies on bed & on her left side.
6 Keep the urinary bladder & lower bowel empty
7 Restrict the diet to nourishment of the lightest form Avoid all stimuli bodily or mental, but endeavour to cheer & support her.
8 Keep your patient cool & the room well ventilated
9 Prevent her fatiguing herself, or making repulsive muscular movements or efforts
10 Prevent or palliate any unlooked symptoms that may supervene as nausea vomiting. Prostration & despondency. Be observed during the last part of the stage

General rules regarding the Management of the Second Stage

1 Be extreme to enforce all the rules stated in the management of the first stage in regard to diet, ventilation, & position
2 Examine as soon as possible after the rupture of the membranes in order to ascertain if any part has prolapsed, the cord in hand

3 Repeat the examination occassionally to ascertain the progress of the head. Observe progress.

4 Alleviate distressing symptoms as

(a) Pain in the back

(b) Cramps or spasms in lower extremities

5 How are the limbs separated when head descends to outlet

6 Support the perineum?

Advantages obtained from this practice

Different methods employed

Exploded practices of Dawson

Make the head pass through the outlet in that form and which it presents its smallest void & direct the head & body out in the axis of the outlet

After the head is expelled ascertain if the cord is round the neck & if so free it

Cease the expulsion of the body to the Uterine Actions as much as possible alone.

Guard & support the perineum during the passage of the shoulders & body.

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Obs rules 1 & 2. Examine during pain & complete it after pain has ceased. Allow patient to do as much the latter till dilatation of about 1½ or 2 ins. Then lets her get into bed. See the bowels & bladder are emptied. Give

light diet if any be required. No stimulants as alcohol for anything. Keep her cool & quiet. Do not let your patient bear down or make any muscular efforts during first stage. Palliate any symptoms. Sensation said that a sick labour is a quick labour in as much as it is caused by the quick dilatation. Ether may have to give soda or tea. If nausea give hot milk with some pepper in it. If rigor, which often occurs after a large flow of liq. amnii from reflex action, do nothing for it will pass off. If delirium give anæsthetics.

During Second Stage

Patient should be in bed. Follow all previous rules as to diet, ventilation &c. Let her keep on left side as much as possible. See that no part of cord, or hand is prolapsed, if so return. Examine frequently & ascertain as to position & size of child's head. Notice if the head is advancing. Relieve head if it jams in the pelvis. Palliate pains in back by pressure of flat of hand supporting at back of sacrum. Cramps & spasms are probably due to pressure of head on nerves. Best relieved by rubbing or by tying a handkerchief or towel tightly round the calf of leg. As head reaches the outlet support the perineum & keep the legs apart by a thick cushion between knees. Object of supporting the perineum is to relieve the pressure & may also

promote the mechanism of the perineum, it is also prevents the too rapid during throughs of the head, before the part is properly distended. Some celebrated practitioners opposed supporting the perineum at all on the ground that it hinders parturition. Support it with the palm of the hand. Never use not to draw back the perineum over the head of the child for it is a very dangerous practice for rupturing the perineum though it is recommended in some books. Direct the head with its longest diam. in the longest diam of passage. And birth of child's head do not use it as a means of extracting the body, but leave that to the uterus itself alone. Ascertain there is no cord round the child's neck if so free it if possible. Necessary to still guard the perineum on the passage of the shoulders. * 39

Duties after the child is born

1 Draw the infant beneath the bed clothes & arrange them so as to prevent the access of cold and to allow infant to be rolled

Pass free hand over her abdomen to ascertain
(a) If there is a second child
(b) If the uterus is contracting.

2 Place two ligatures on the cord & divide between them. (two-ed)

Cautions

a Position of the first ligature - Mamma.

b Its sufficiency when the cord is thick

c Divide the cord always on the palmar of your hand

(Dressing the Cord)

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Keep patient covered up. Pass the hands up over the abdomen & make sure that there is not another child & also if the uterus is contracting.

Separate child from mothers by placing two ligatures on the cord & cutting it between them. The one at the placental end to prevent the blood going on bed clothes & also if there be any other child that it may be not bleed to death. On the child's end tie the cord very tight with some elastic tape. Divide it on the palmar of your hand.

* 40 Lecture # 2 Jan'y. 22nd - 1875

See whether your patient requires a stimulant

General Rules for the 3rd Stage

Two extremes of practice have been followed.

a Immediate removal of Placenta

b Leaving its expulsion entirely to Nature

Recklessness of the former practice

Dangers arising from the second

An intermediate practice now followed

Leave to expulsion to Nature for a limited period & then extract if necessary

Time of interference early. Why?

Rules

1. Wait for 10 or 20 minutes to see if expulsive pains are known to expel Placenta
2. Then ascertain if the placenta is in Uterus or V agina
3. If it be in V agina, extract it - Notes
4. If it be still in Uterus execute the contractions of that organ to effect its expulsion
5. When these means are insufficient at the end of one hour extract the Placenta artificially - Its cons
6. Its abse all your traction on the cord & extract the placenta itself in the lines of the descent pelvic axes
7. Take especial care to bring away both the placenta & the membranes entire
8. Cases where in which you dare not wait an hour

Subsequent Duties of Accoucheur

1. Apply a warm cloth to Perineum
2. Apply a Bandage to Pelvis
3. Remain with patient at least 1 hour.
4. Before leaving her ascertain
   (a) If Uterus is contracted
   (b) If discharge be not too profuse
   (c) If no marked constitutional symptoms

5 Z ward against the patient leaving the horizontal position
is being exposed to mental or bodily excitement.
6 Lower injections to be called if faintness de rigors
or continued before pain supervene

Anaesthesia in Midwifery

History - Agents employed

Objections

1 Theologic

2 Moral

a Practice unnatural

b Abrogation of consciousness

c Does not mediate nature

d Excites aphrodisia

e Unnecessary

3 Medical

a Pain & state desirable & salutary

b Anaesthesia produces serious symptoms

c Interferes with mechanism of labour

d Arrests uterine action

e May prove fatal

Causes of Accident

Means of Resuscitation

Cases wh use in 18 47

If suicidal compression of nerves & drugs were used
it turns to trade.

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the funis about 1½ inches from child's Abdomen. Some dont tie it but cut it with a blunt pair of scissors in imitation of an animal which cuts it by chewing it with its teeth. Dress it with a bit of cotton or linen. Animals eat up the placenta. The Iroquois Indians invite their friends & have a feast upon the placenta.

Used to extract the placenta at once on birth of child but caused many dangers. Then went to the opposite extreme & probably lost as many cases. They now take an intermediate course. Wait 10 or 20 minutes & if placenta dont come away, feel by following up the cord whether it is in vagina or in Uterus. If in vagina extract by your hand or by patient giving a bout of cough. In extracting give the membranes a twist so as to keep them from breaking. If still in the Uterus make external compression by squeezing together the Abdt. & Post. walls of Uterus. Thus you can gently excite contraction, but keep up your compression of the fundus. You will feel it contract & expel the placenta. An injection of Ergot just as child's head is being born will insure steady contraction of Uterus after its birth & a speedy expulsion of placenta. This is in Multipara. Expect about 1 in 6 to always give Ergot if Placenta does not come away

Don't try to extract it by pulling on the funis.
If you cannot get away the placenta within 1 hour pass your hands into the pelvis & extract the placenta bit by bit. In doing so insert your fingers between the placenta & the uterus at the edge & thus pass gradually all round the placenta & thus separate it & then bring it away through all the pelvic axes. Mind you bring away both placenta & membranes.
If profuse hemorrhage & great prostration, don't wait one hour if uterus does not & you cannot make it contract but extract it.

Labour Over Subsequent Duties

Nurse patient cleansed & apply a warm cloth to the pudenda. There is a profuse discharge for it is a process analagous to menstruation only here there is blood the fertilized & ground worn.
Apply a bandage round the patient's abdomen & pelvis from the level of the pudenda up to the Mamma. Apply it as tight as you can like you get to the margin of the ribs, for applied lightly there it may be injurious from pressure on the Liver Gall & other organs.
Some apply a pad under bandage just over the Uterus.
Stay in the house one hour after labour at least for fear of post partum hemorrhage for it most occurs within that time. See if she has much discharge & also

feel if the Uterus is contracting by passing your hand upon under the bandage. Lastly see that state of bed pulse. If pulse be very no-calm & rapid there is danger of flooding you may now leave, but leave directions that she does not rise from her bed, that she has nothing to excite head & that if faintness, rigors, or pelvic pain continues they must call you again. Rigors at this stage often indicate the absorption of some septic matter

Lecture #3 Jany. 23rd 1878

Rules for the exhibition of Chloroform in Parturition

1 Begin it when the patient begins to complain of much pain generally towards the end of first stage.

2 Always moderate perfect quietness around the patient especially when first giving chloroform.

3 Give it always during the pain & withdraw it during the intervals - exceptions

4 When given during the 1st stage the Anesthesia need not be deep except when the suffering be great & symptoms of anesthesia be disagreeable

5 In second stage proceed to make the anesthesia so to destroy all sensibility

6 Dont allow the bladder to be over distended but dont advise the patient to empty it.

7 Do not restrain the patient in one position

8 Be sure to remove the Chloroform as soon as the child is born.

9 Do not awake the patient artificially

* * *

Anaesthesia in Midwifery

History - Several mentions of them in Classics, but really first used in 1847. Compressed of nerves had been used. Mandragora, Indian Hemp or Wang Te had been administered. Sir Humphrey Davey had introduced N Nitrous Oxide. First used in America by a dentist afterwards by his pupil Dr. Morton in 1846. On 19th of Jany. 1847 Sir J. Simpson first gave an anaesthetic in the delivery of a child in one of the closes in Edinb. & successfully. Used it on several other cases, then made publication of it. Its use gradually extended. Now it is more & less employed throughout the world.

Agents - Ether, Nitrous Oxide, Chloroform &c.

Objections - 1 Some said it went against the word of God & his will for he said "Thou shalt bring forth in pain". Said that great objection was from old maids who forgot that the Bible also said "Thou shalt multiply & replenish the earth"

2 Moral - Some said it was unnatural, but it is no more so than using a carriage to save your Legs from

the "natural" fatigue of walking. It does suspend consciousness but so it does in surgical cases. It does not inebriate nature, but it does set kindred nature for parturition goes on just the same. As for asphyxia, it is rubbish & has not been seen by any sane minded practitioner.

3 Medical - (a) If painless state was desirable & salutary the longer it goes on & the more salutary, what rubbish why get over the labour as quick as possible? If pain is never either salutary or desirable (b) seldom any disagreeable symptoms in the sickness of labour is apt to pass off under it. It was said to produce convulsions whereas the fact is one of the best means to hinder & prevent them. Said to produce puerperal mania, pericarditis &c & then rubbish who in fact it tends to prevent puerperal mania. (c) Said to interfere with labour, to retard or arrest its action. So you may in some cases if pushed to extremes but seldom for we often wish we could & cannot, but it depends on the degree to which you administer the chloroform. If the labour goes on so quickly as to endanger rupture of perineum give the chloroform to a greater degree. (d) It may prove fatal. So it may, but so may any of the drugs in the Pharmacopeia so may bleeding &c but are these to be given up for that? The deaths are very rare in deed in cases of midwifery. Simpson only knows of one case occurring in Edinburgh & that

was doubtful whether it was from the anesthetic. In fact it may often prevent death by hindering shocks being felt.

Causes of Accident - Giving bad chloroform. Giving an over dose. From imperfect method of administering. Cases of heart disease (if valvular though it is often of benefit). Lung disease is also a drawback.

To Resuscitate - Pull out tongue &c. Place head lowest as hanging down. Cold water Battey &c &c. Given to delay about 10', to relax passages, to prevent convulsions, for labour & mechanical labour

Rules for Exhibition of Chloroform - N. See the preceding table. If necessary to empty the bladder use the catheter. Let her awake of her own accord

Lecture 11th Jan. 24th 78

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Morbid Parturition

Class of Laborious Labours

Definition - Head presenting, but some morbid relaxation

Standard of Time

When beyond 24 hours - Two kinds of exceptions

Rules for calculating duration

Laborious Labour, its 3 Pathological Sources

1 Fault in the expulsive forces

2 Fault in the passages. Obstructions from state of canals through which child is expelled

3 Fault in the product. Obstructions from body to be expelled

etc. These states may be present singly or combined

The degree of difficulty induced by them leads to subdivision into two orders or genera of such labours

1 Tedious - Nature & medical art still sufficient

2 Instrumental -

(a) Surgical aid required but safe in principle both to mother & child

(b) Where a full sized child cannot be extracted thro' the natural passages & operation injurious to child or mother

Dangers or tedious labours from protraction of the First Stage

When does this stage become marked in duration?

Postpositive opinions of Hamilton Burns Collins &c

Cannot be regulated by time alone

Other elements entering into calculation

(a) Powers of endurance of patient

(b) Strength & continuous regularity of the pains

(c) Resisting degree of pressure in the Uterus

(d) Probability of the obstructing causes yielding or not to natural efforts

May require interference earlier than 10 to 12 hours
Always becomes an anxious case if the Os is not opened
after 12 or 14 hours after regular labour
Dangers to be apprehended from delay
Local pathological causes of the protraction of the
first stage of Labour

I. Fault in the expulsive Force: usually either
A. Fault in the passages
1 Rigidity of lips & neck of Uterus
2 Rigidity of a band of circular fibres in Cervix
3 Closure of the Os Uteri
4 Oblique position of the Os & body of Uterus
5 Retraction of a fold between the head & pelvis
i.e. fold of Cervix
6 Large size of Pelvis & morbid relaxation of
soft parts leading to prolapse.
B. Fault in product of Parturition
7 Hydramnios
8 Preternaturally tough membrane
9 Premature rupture of the membrane.

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Labour if lasting 24 hrs is said to be laborious
When does 1st stage become morbid?
It must not be regulated by time alone, but the case may

require some interference, also the strengths & nervous energy of women varies so much often have to interfere before 10 or 12 hrs. It becomes an anxious case if there be 12 or 14 hrs of steady regular pains without effect on the Os. Rarely any fault of expulsive action of Uterus during the 1st stage, the fault lies either in the passages as given in preceeding table or else lies in the product of labour.

The longest labours are those in which the 1st stage is long delayed.

Rigid Lips & cervix are most often in first labours especially in those of advanced age, also in premature labours. Also when the parts are scared & thickened by some inflammatory action previous. Left from some previous labour, as Lacerations &c especially if she has been treated by Ag NO_3 when it often becomes cartilaginous. Or may be due to organic disease as Carcinoma of Cervix & then it proves very fatal for Os don't expand & previous. cervix gets hard up. Or may be from a spasmodic contraction of Band of muscular fibres just inside of Os. Can only tell these states by actual touch with the fingers & must do so & ascertain whether the canal is dilatable. To examine during pain & feel its effect on the Os & by it between the pains you can dilate it or if it is perfectly rigid

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Pathology & Diagnosis of each Male

b. Fault in the passages

i

1 Rigidity of tissues & needs of Uterus

Different varieties of rigidity

1 Structural as in Primipara Premature Labours

2 Inflamatory & cicatricial

3 Organic disease as cancer

4 Spasmodic

Diagnosis Prognosis

Measurements of rigidity against treatment

1 Constitutional Means

a Blood letting

b Nauseating & relaxing medecines as Antimony Opium Tobacco (Dangers)

c Warm baths

d Sedatives Particularly Opiates

Indications to be fulfilled by Opiates in first stage. Rules for regulating their employment Mode of exhibiting

e Chloroform

2 Local Means

a Scarifying or blood letting

b Local relaxation & sedative medicines as Belladonna
Stramonium Chloroform

c Ungreents as bals & Soaps

d Vaporous Mucilaginous injections Warm hip baths

e Mechanical dilatation of the Os. Its effects & propriety
doubted Evidence Mode of action
Manner of employment Fingers India rubber bag

f Incisions - an imitation of nature When justifiable

II Rigidity of Os and of circular fibres of Cervix Uteri
Diagnosis. Edges of Os uteri swell during a pain but
dont get loose & bag of membranes not in contact
with them
Structure felt in the uterus at 1 or 1½ inches up
Liable to occur in the same individual again
Treatment

Same as in general rigidity - Relaxants & anæsants
Opiates if available
Pressure on Cord during pains

III Ossification of Os Uteri
Causes - Ulceration. Attempt at Abortion
of natural termination by rupture of complete
Great degree of dilatation of incomplete
Treatment Local

Formation of an opening by knife if complete
make it in 5 sts taking care if possible to avoid
cutting the bag of membranes if much with the
finger
Enlargement of Os Uteri if treatment of rigidity be
not alone sufficient

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The Rigidity of Cervix — may natural as in Primipara or from inflamatory states, or to organic disease, or badly to unstable or spasmodic rigidity of muscles of Os Uteri.
Treatment for Rigidity - Blood letting most commonly used formerly it was also thought to remove the tendency to morbid inflamations. We now give anodynes & attempt to imitate the natural weakness of labour for rest labours are quickest such as Antimony Opium & Tobacco which last is very dangerous in labour. Warm baths are also good. Also Sedatives & Acetic acid. If labour lasts long in first stage say 12 or 14 hrs with steady pains & these pains become short weak & irregular from rigid cervix giving out the uterus, these opiates are certainly required to suspend

suspend the uterine action & thus rest & strengthen the uterus. Before giving opiates the bowels should be opened. Give the opiate in a good large dose as 30 or 40 minims of Laudanum. Chloroform often assists tedious first stages of labour. Also Chloral Hydrate is of good

2. Local Means - Blood letting & leeching now not used

Belladonna Stramonium Chloroform do no goods locally. Unguents as oils & soaps are certainly very good. Injections of warm water & retaining it in the vagina soften the rigid lips as much as anything

Artificial dilatation - Many have objected & say that it cannot be done. But we can hasten the dilatation with the fingers or elastic bag. Press the finger round the os during the interval but more determinedly during the pains gradually introduce two or three fingers & when soften dilatation has got beyond point at which it delayed it will go on start & go on itself. We shall speak of elastic bag afterwards. Sometimes when neck is very cartilaginous we require to notch it in a few places not one place alone as it may cause one deep tear

Rigidity of band of circular fibres at Os - Edges of os swells but does not get loose & membrane does come against them. The band is generally about ½ or 1½ inches up the canal. Often occurs in the same individual. Give enemies or opiates to relax the band.

III Occlusion - may occur after conception, from inflammation, causes be from injury of lips from attempts at abortion. We can only detect this by the dimple representing the os & feel it when the mass is pressed down by the fingers. Make slight notches with a lancet through the dimple & complete the opening with your fingers & thus enlarge it.

* * *

* IV Oblique position of body of Uterus
most common anty. inclination of body of Uterus
Vaudeloux ab dorsum
Symptoms from. pressure becoming more distracted
Treatment
Place her on her back if anteversion
Keep the uterus in its proper position by a bandage
Failing to Uterus into axes of position

V Wedging of a fold of Cervix between head & pubis
Almost always in front Its frequency. Causes
Diagnosis
Treatment - Support & dilate the Os during a pain
When Os is dilated push up the segment above the head

VI Large size of Vagina or morbid relaxation of the soft parts allowing prolapsus - Diagnosis - Treatment.

B. Fault of Power

VII Over distension of Uterus by Hyp. Amnii

Hydramnios - It does too much disturbed to act properly
Treatment - Rupture the membranes. Symptoms of it.
VIII Preternatural toughness or adhesion of membranes
Treament Rupture. Mode. Instruments
IX Premature rupture of the membranes - Dangerous to

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IV Oblique Position of the Body or Os - The Ant^r inclining
above the most common. In these cases the abdomen
is generally distended. We can only correct this by
applying a binder so as to bring the uterus in line of
parturient axes. Also Ant^r lip of Cervix also sometimes
gets impacted between the head & Os Pubis. It has
been confounded with the bag of membranes also even for
the swollen head of child also for the bladder. Recognise
it by passing finger past it into the os & find that
this lip is the part unexpanded. If you still think
it the bladder pass the Catheter to certify. Press upon
this folded lip upon between pubis & head of child
& expect. between the pains by & by the accoucheur will
get past it in one of the pains, softening the part
with hot soap & water.
I Rarely if ever the Pelvis is so large & morbidly relaxed
that the soft parts prolapse. If so support cervix
during a pain & dilate artificially if necessary.
V Over distension of Uterus by Exp. Ammii - Belly

much swollen & breathing much impeded. Draw off a quantity of the L. Amnii by means of a long trocar & canula passed through the os & past the head of the child. Sometimes necessary to rupture the membranes on account of their toughness

VIII ... Preternatural toughness or adhesion of membranes Rupture them with some blunt instrument as blunt pointed scissors &c

IX Premature escape of Liq. Amnii - Escape of a portion often helps the pain but loss of the whole causes a dry labour & it is long & difficult therefore guard against the premature rupture if possible. For the wedge dilating power of membranes is lost the elastic bag has been used to fulfil their purpose

* 45 Lecture 46 Jany. 29th. 1878

IX Premature rupture of membranes
Dangers False Waters
In what circumstances beneficial
Explanation of deleterious action
Labour proceeds want of a wedge
Painful - On account of stronger contractions & head presses directly on os & hence apt to lead to irritation or even to change of position.

Danger to Child

To be especy. guarded against in first pregnancies

Treatment

Remove all other causes of protraction so as to prevent interference with the Uterine efforts. Promote relaxation by Anæsthetics. Use the fingers if necessary as an obstetrical wedge.

Abnormal protraction of the 2nd. Stage of Labour

A. Inefficiency of the expulsive powers of parturition as a cause of tedious labour

Varieties & sources of this delay

Inefficiency from general constitutional debility

Seldom produces this effect when original & pre-existing

Often produces this effect when secondary or acquired

Importance of this view in relation to practice

Diagnosis of constitutional exhaustion

Symptoms

Treatment - Principally preventive

Inefficiency in the accessory expulsive powers

May originate from state of abdominal parietes

over distension of abdominal cavity

condition of organs within the chest

short state of the abdominal muscles

palsy or exhaustion

III Inefficiency in the expulsive powers of Uterus itself-

(a) From the partial irregular or spasmodic contractions

Causes leading to this state - symptoms

(b) From general inertia or atony of the organ

Causes producing it from origin of labour

" " " during course of labour

Diagnosis of tedious labour from uterine inertia

Rules of treatment in lingering labours dependant on deficiency of the expulsive powers

1 Should I avert the general or constitutional causes

2 Remove any local mechanical causes which may lead to produce or maintain it

3 Be careful to husband the patients strength & spirits

4 If the accessory expulsive powers are at fault use abdominal bandage & change position

5 If symptoms of uterine congestion or inflammation. Give Bath Barbar Bandage &c.

6 If contractions irregular or spasmodic. Friction operates in 1st stage

7 If simple uncomplicated inertia excite the organ to renewed or increased action by

(a) Electricity or Galvanism if at much good

(b) Abdominal compression. Friction & Bandage

(c) Stimulating cyclsters or purgatives

(d) Reflex irritations

(e) Injections of water

Dystocic remedies as Bang-Braxe-Krypt-Cinnamon.
Krypt of Rye - History - Objections to its use
Its effects - Nature of action produced
Rules for exhibition of Krypt of Rye * 45
It was exhibited if the first stage of labour is over or at least the Os perfectly dilatable.
It is given in the second stage if the Vagina & external parts are in any degree rigid Hence rarely used in 1st cases Only give it when the passages are fully prepared & only some additional expulsive power is required
If the waters fully escaped for some time avoid giving it if any probability of delay.
46 Lecture 47 Jan. 30th 1878
Inefficiency of Krypt generally is from getting bad Krypt Preparations
Results of Dr. Hays Observations on the action of Krypt
1 Children born alive
Cases in which the Uterus expelled the child alive 4
Cases in which child born alive by Forceps & Vectis after Krypt was given 4
Children born dead
Cases in which Uterus expelled the child dead 15
Cases in which Forceps & Vectis were applied after Krypt but the child born dead 6
The children dead from Krypt & delivery by Crochet 13
Total 34

Obstructed protraction of the second stage of Labour

B From local organic pathological causes on part of maternal passages

I Rigidity & contraction of the vaginal canal & vulva from
- a Simple inhabitability of these structures
- b Congestion Inmflaction & inflamation
- c Original malformations
- d Persistance of strong & double hymen
- e Acquired morbid adhesions, cicatrices, stricture &c

Causes of Diagnosis Effects

General Rules of Treatment

1 Whenever any marked tendancy to congestion & inflamation - to use injections - sedatives - Emollients &c.
2 To allow Nature & aiding relaxation by appropriate means.
3 And Uterine efforts by compression
4 To use incision into any obstructing structure if such treatment becomes absolutely necessary
5 Always make such incisions during a pain
6 In all cases avoid too frequent examinations
7 Dont let the head pass till the perineum & vulva are completely dilated

II Distended bolus & Rectum.

Causes diagnosis prognosis treatment

III Hernia of the intestines within the pelvic cavity

Diagnosis Forces
How to promote it

1. Distended Urinary Bladder

a Without displacement

Its effects & fatal results
Character of the tumour
Fallacies - Introduction of the catheter
Treatment - Catheterism - puncture

b With displacement

1st Tracts-each into V agina
2nd effaces & less laterally
3rd Into Recto-vaginal space
4th Imitating femoral hernia
Mistaken for membranes - for head - for tumour hence great importance for using catheter in all cases of the least doubt
Treatment - Want of catheter.

2. Calculus in Bladder & Urethra

Diagnosis. Errors in neglecting catheter
Treatment - 1st. Push calculus above Pelvic brim if possible
2nd If not & nature be insufficient to remove it, remove it by
A. Lithotrity
B. Lithotomy

3. Removed successfully during pregnancy

4. Ovarian & Fallopian Tumours
Situation Size Pathological & clinic Varieties

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Ergot causes a steady continual contraction of the uterus. Dont give it till Os is thoroughly dilatable. Rarely before end of 1st stage. Dont give it in 2nd stage if any rigidity of vagina &c & hence seldom given in first labours. If waters have escaped & uterus is closing round the child dont give ergot. It is said to have caused rupture of the uterus but this is chimerical. Towards close of 2nd stage when pains are feebly dilatable is time to give it. Ext and tinct are active preparations of it. Give it in a good large dose as 3i or 3½ of the liquid extract & repeat 3i every ½hr. Best give gr IV of Ergotine by hypodermic injection.

Morbid obstructions of Stage II

1. Rigidity of Vagina &c - Always more or less in premature labours & in 1st labours
2. Congestion Inflammation & inflammation - Caused by other causes of obstruction as from jammed head or large head &c
3. Original Malformation - Of narrow vaginal canal, in one case spoken of as of only size of a pencil case
4. Double or strong hymen - Not broken & thus obstructing the descent of the head
5. Acquired adhesions cicatrices &c - As from disease or too long previous labour, fistulæ &c

Diagnosis - Can only be made by digital examination, thus recognise the state of affairs. You must study

the effects & products of the labour. General Rules for
Treatment - If inflammation or congestion be use injections
(warm water & soap) sedatives & emollients &c.
In these cases trust much to nature. Try & soften
the hard resisting faeces with oil soap &c. Then if the
resisting structure will not dilate by your fingers or
an ass bag. If still not dilatable you are justified
in making a number of slits with a knife & do it
during a spasm. In these last very difficult cases
examine as seldom as possible & then always use plenty
of soap & oil on your fingers. But let the hand
escape in these cases till specimens &c are well dilated.
Distended bowel & Rectum - Hard faeces may hinder parturi-
tion. We must feel mass through posterior wall of pelvis,
the mass yields on pressure. If not it must be
very hard & can only be diagnosed per anum. Give
castor oil, or injection of olive oil & castor oil, sometimes
must remove the faeces with the fingers. scoop or spoon &c.
Prolapse of the intestines - By feeling it & you it contains fæces
& replace it by taxis. If you cannot return terminate
labour as quickly as possible by the forceps
It may be from distended Urinary Bladder - It has been
found even in the pouch of Douglas. The more distended
the more it delays the descent of head & also reflexly it
irritates & affects the action of uterus & accessory powers. If

may be often deceived when patient lies on her back by appearing as a protuberance beside that of the uterus. By palpation & introduction of catheter we certify this We the catheter gently & push back the head if necessary there are cases in which practitioners failing to pass the catheter have punctured the bladder above. Better to use forceps at once

V Calculus - Diagnosis from a history of symptoms. We may also probably feel stone through vaginal wall, but always make sure by means of sound or catheter. If labour is on if possible push up the calculus above brim till the head descends past it. If you cannot do this operate to save your patient. Two modes of operating. First dilate the urethra & extract the stone by finger or forceps. If not this we may secondly cut into the bladder & extract it & treat the fistula after the labour is over

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VII Tumours embedded in or attached to the soft tissues surrounding the maternal passages

a Of Uterus Tumours in the lower segment of the Uterus

b Polypi of cervix & labia uteri

c Polypi of the vaginal canal

d Encysted follicular tumours of the Vagina
e Cystic tumours & abscesses in cellular tissue of the pelvis
f Sarcomatous tumours of the Vagina & bladder
g Thrombus
h Varicose, enchylomatous & other tumours of the labia
Diagnosis Minute examination & situation &c
In every case first empty the bladder & the rectum
Exploring needle *48

4th This next should come at end of last table
Effects of Ovarian & Fallopian tumours upon the labour & the labour upon them.
Diagnosis Prognosis from complications
Rules of treatment in obstruction from ovarian tumours
1. If tumour sufficiently loose push it up above brim
2. If this is impossible & the tumour small & uncompressible
the leave the case to nature - avoid delay or long pressure
If instrumental aid required & tumour not very large
use the forceps
If not space for forceps to aerate the tumour (if any
fluid in it) by puncture or incision & then trust to
nature or forceps - Seat of puncture
If tumour still remains too large or if it is originally
solid perform Tumbrypulcia - other alternatives proposed
a Version of the Fœtus
b Cæsarean Section
Induce premature labour (on subsequent pregnancies)

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Symptoms - regulated by size, consistency, situation and de of resisting Body

Treatment

The rules are nearly the same as for Ovarian Tumours

1 If ant the efforts of nature & aid them by relaxants & compressing portion of tumour

2 If the obstruction cannot thus be overcome then gain (a) Space by opening the tumour if there is any chance of it containing fluid

(b) If the tumour consists of recently effused blood either draw off or kill it by time to coagulate or apply the forceps immediately after emptying it

(c) If the tumour is solid & removable extirpate it

d If a pedicle use ligature & knife

3 If the obstruction cannot thus be removed then use forceps, perforator, embryulcia, or even Caesarean Section according to existing circumstances

III Tumours [illegible] & Allopram - Of various kinds as unilocular, multilocular. Often very serious & very dangerous obstructions, so much so as to sometimes cause rupture of the uterus. If possible push up the tumour above the pelvic brim so as to let the head get past it. It is sometimes possible to do so & thereby clear it where the head fills up the pelvis. If impossible & the tumour small & compressible wait & see what nature can accomplish, but avoid delay & long pressure hence use the forceps as soon as possible. If cannot deliver with forceps seek to lessen the tumour. Often pass in an exploring needle to see whether it contains fluid or not. If fluid evacuate it by puncture or incision if multilocular tap as many cysts as possible till it gets small enough to let head pass. If it be solid or too large we must perform Craniotomy. Incision has been made & also Caesarean section. If these tumours obstructing the pelvis are found early enough it is as well to induce premature labour & also in subsequent pregnancies. These tumours are most frequently present before conception.

II Tumours embedded in maternal passages - If sterile cause abnormal presentations as well as obstructing the labour & hindering the accessory powers. There also may be [illegible] of Cervix Labia Uteri & Vagina

Also Cystic tumours & abscesses; as well as carcinomatous tumours of the Vagina & Bladder.
There may also be Thrombus or extravasation of blood.
It occurs (that is the ruptured) genit. during the second stage. It is very fatal. If fatal from hemorrhage & from blocking up the canal
Of varicose, condylomatous & other tumours of the labia are also dangerous from their bleeding & also obstructing. All these cases must be treated in a similar manner to Cancerous tumours, viz: pearling them up, or opening them if containing fluid. If thrombus must slit up the mucous memb. till as late as possible then you allow the blood to coagulate & prevent a great amount of bleeding. If atheromatous tumour if solid & removable as by scissors. If polypus ligature it & remove it with the knife. If the obstructions cannot be removed use forceps or the Vectis, Embryotomy or even Cesarean Section according to existing circumstances

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VIII Abnormal Pelvis

A. Well formed but abnormal in size

1 Abnormally large

2 " small { a. masculine form
b. feminine "
c. infantile "

B. Deformed

1 Individual peculiarities

a Funnel shaped

b Deep

c Shallow

2 Antero-posteriorly contracted

3 Transversely contracted

4 Obliquely contracted

5 Compressed Pelvis of Rickets & Malacosteon
Changes in measurements at Brim, hollow of Sacrum, Outlet, arch of pubes

6 Spondylolisthetic Pelvis

7 Pelvis distorted by morbid growth or injury

a Encysted tumour

b Tumours of articular tissues

c Tumour of bones { 1. Osteo-Sarcoma
2. Exostosis

d Ununited fractures

e Anchylosis of Coccyx

Influence of Malformed Pelvis

on 1. Presentation & position of child

Frequencies of malpresentations & complications

2 Mechanism

in Flat pelvis

in Pelvis equivalents pass minor

in Pelvis generally but unequally contracted

3 Progress of Labour

Precipitate

Protracted

4 Life of mother & child

Diagnosis - History General configuration

Pelvic measurements - Pelvimetry

Pelvic Measurements

A. External

1 Between spines of Ilium = 9 inches

2 " crests of " = 10 inches

3 " trochanters = 11 ½ inches

4 Conjugate (Baudelocque) external measurement between spine of last lumbar vertebra & symphysis of Pubis = 7 ½ inches

B. Internal

Conjugate (Diagonal) = 4 ½

Precautions required in various degrees of Pelvic contraction

Conjugate diameter - measures employed

1. 4th rows 4 to 3 1/4 inches — Forceps
2. " 3 3/4 to 3 inches — Turning
3. " 3 1/4 to 1 3/4 inches — Embryulcia
4. Below 1 3/4 to 1 1/2 inches — Cæsarean section
5. Between 3 1/2 & 2 1/2 inches — Premature labour

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Abnormal Pelvis

May be very large every way as sort of giant pelvis or it may be very small every way the measurements table being proportionate or it may be of a masculine or feminine or of female form.

It may be deformed. 1. May be found shaped from sacrum being much forward 2. Deep or elongated, or may be from an additional sacral vertebra, or it may be shallow just from opposite causes. 4. The pelvis may be antero posteriorly contracted especially from rickets & this is a common form & called the flat pelvis 5 & it may be contracted laterally or transversely.

It may be obliquely contracted as from lateral curvature of the spine, a amputation of a limb, or anchylosis of such joints affecting it, this is called Naegele's.

Pelvis may be compressed in various forms by Rickets

when brim is much elongated transversely & narrowed the conjugate diameter, in cavity the sacrum is pushed forward & looses its curved form & becomes flattened, at outlet it is largely opened out & very large, the pubal look almost directly forward the ischial tuberosities are pushed far apart the iliac spines are far distant.

2. pelvis may be compressed from malacosteon in which disease the bones become soft from absorption of the salts a disease of mature life. It results in a pelvis of a star shape being pushed in on every side. At brim all its diameters are shortened the pubis are pushed forward & the pelvis is often called the "beak shaped pelvis". There is a conjugate diameter perhaps 3 in. & also an available conjugate perhaps of only 2 in. In the cavity the sacral curve may be very deep, but it is from bending up of coccyx & sacrum from pubis nothing to At outlet the pubic arch is much lessened & all the diameters are very much lessened. Of all pelvis this form is the worst

3 Spondylolisthetic pelvis is that in which the last lumbar vertebra has slipped down below the sacral promontory as from disease in child hood &c

4 Distorted as from bony tumours &c, ununited

fractures, anchylosis of coccyx &c.

Malpresentations - It is more frequent in deformed than in normal pelvis. And if head presentation it is often of a bad form as the Brow, or it is one of the unusual diameters

Mechanism - In flat pelvis the head enters brim in transverse diameter & anterior fontanelle first. In equal diameter pelvis or "ovoid obstetric pelvis" the head descends with the occipital fontanelle first. In unequally contracted pelvis we get a mixed result

Progress of Labour - Rarely it is precipitate, but very often it is long protracted in the various stages according to where the contraction exists. The pains are stronger. Mother may get exhausted. Baby die. Heads squeezed & deformed. Mother's parts may be so compressed as to slough &c. Fistula may be rupture of uterus. May have to destroy child &c.

Diagnosis - Often from History as of rickets malacosteon &c. Type & shape of woman. If little woman more likely to be small. Or if deformity of other bones there is seen of deformed pelvis. From general configuration abroad. From measuring the pelvis with a pelvimeter both externally & internally

Measurements are 1. External - Between spines

of 2 lines 9 inches about. Between crests of ilium 10 inches about, a about 1 in more than last. In sickly they will be longer. And same way with other bony outlets & Conjugate diameters

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Obstructions on part of the Child

1 Shortness of umbilical cord

a From absolute shortness

b From conformations round child

2 Death of the Child

Under what circumstances delay labour?

3 General large size of child.

Its average weight & dimensions. Occasional degree of excess Greater size of heads of male infants

Measurements of heads in 60 males & 60 females

Average circumference male 14 inches — female 13 5/8

Arch from ear to ear male 9 1/2 inches — female 9 1/8

In 6 children out of 120 the circumference was about 14 1/2 in

These were all males

Greater mortality among mothers in male births as illustrating the importance of slight increase in size

Greater number of morbid complications in male births

Greater mortality among male than female children during labour. The same in early infancy

Extent of the effect of the greater size of the male head in general most ability to mother & child

Strong ossification of the head

Its effects - their explanation

Incompressibility

Diagnosis of 3 d P - difficulties

Management of both sets of cases

First as much as possible to nature, using all appropriate means to relax the passages & ward off all accidental infections & obstructions

If these unable compress or diminish the head with instruments

Enlargement of head from disease (in body)

a Hydrocephalus - its frequency - diagnosis - effects

b Hydro rachitis

c Hydro thorax

d Ascites

e Hydrocephalus

f Tumours

Diagnosis from effects - former examination

General principles of treatment

Let nature complete if her efforts are sufficient

If danger threatened & head not yet born open any tumour upon it & the cranium if hydrocephalic

If head born & body retained assist by traction or if necessary by perforation of enlarged part.

B. Internal

To get conjugate diameter 1st get the conjugate diagonal by passing from fore finger on two fingers on under symphysis pubis to promontory of sacrum then off this measurement subtract 8 lines & it will give the straight conjugate diameter. This should be about 4 inches minus 8 lines & is most important dia. The measures to be employed as suitable for various less small diameters are given in the previous table

Obstructions in part of Child

1. May be from cord. This is very rarely less than 10 inches long. If coiled round the child, loose it but if impossible & it is hindering parturition dont attempt to cut it. Some records a great lot of useful for selected dangers to this state

2. Death of Child. May delay us from its having become emphysematous &c.

3 Large size of child - The average weight about 7 lbs to 8 lbs. Hamilton's tables of one 17 lbs 6 oz. Male infants heads are larger than males. See table for measurements of head in 60 male & 60 female

Greater mortality to mother from male child

Greater number of morbid complications with males

Greater mortality of male than female children during labour. During first week after birth 20 to 25 per

but the ratio grows more equal as we get further from birth. The deaths in utero before labour are about equal in the two sexes. Proportion in labours is 10 to boys to 100 girls in natural labour

Relative weight is male about 7 lbs 4 oz, female about 6.12

4. Strong complications of the Head — It increases the overlapping & moulding of the bones of the head. We must diagnose this by touch. Pelvis may be large enough but large globe (head) presenting. Ossification occurs early & one parietal bone descends before the other. Leave it to nature if she can manage it, using all appropriate means to assist. If not sufficient compress the head or diminish it with instruments.

Enlargement of Head & body forms disease a Hydrocephalus — 1 in 3001 labours — forms a grave complication. Child generally perishes after birth if not before. One head was 33 inches in circumference. Diagnosis may be from external examination. After labour is somewhat advanced we find head does not descend & seek for why & find a great membranous expansion from incomplete ossification of head, wide sutures & large fontanelles & hence we infer it to be hydrocephalus. In 63 cases out of 74 in reference

hand to be employed. Cannot be born unless of only small size. If regularly the cervix is found, effaced & gives way altogether

b Hydrorachitis - Fluid in Spine

c Hydrothorax - Water in Thorax

d Ascites - In abdomen

e Hydrencephalocele - Effect one of tendency, bladder spleen

f Tumours - Can scarcely be so. Many be one any part of child

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b Malposition of the head in regard to the Pelvis

a. Face placed anteriorly or to either groin (in 3rd or 4th position)

Below interference recommended by some

Impossible without instrumental aid

Do these positions constitute morbid cases?

Extent evidence & explanation of the rotation

Proportion of such malposed cases positions

Proportion in which the proper turn is not so effected

Occasionally the rotation imperfect

b. Long diameter of head in left oblique diameter

Press to the opposite direction

Inability & danger of such interference

b Long diameter of head in conjugate of brim

Difficulty in its accurate detection

Occasional conformation of pelvis as permitting it

Its extreme rarity as a cause of difficult labour

Management

Generally no interference - if absolutely necessary the position may be altered by hand or forceps

Edinburgh Maternity Hospital 335 cases

1. Occipito anterior position	{	Sinistra	256
		Dextra	1
2. " posterior "	{	dextra	76
		Sinistra	2
		Total	335

4. Malpresentations of Mec head
Why a cause of delay?
Varieties among them?

A. Presentations of side of head
Presentation of ear
Its variety - causes - conditions under which
it occurs - management

B. Presentation of occiput
Diagnosis - Management
Mechanism - Prognosis

C Presentation of the forehead
Its nature - causes producing it
Its diagnosis - prognosis
Mechanism - treatment
Rectification - when required modes in
which it is proposed to be effected

D. Face presentations
Their nature - relative frequency - causes

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of its treatment of different labours from large size of
body passing. feet Table. If by hydrocephalic head
tap it always before craniotomy. If body large but
tapping it also before dismembering. If ape any
tumours. Remove thus the obstruction

c. 4th position of head in regard to pelvis - 1st. Occiput posteriorly in one or other oblique diameter. This position seldom requires any interference except may be to assist rotation which is often long delayed if there be not considerable flexion. These do not constitute marked cases at least not from the position for they are natural positions. Often the occiput rolls back into the hollow of the sacrum & then the child is born with the face to pubes & this occurs about 1 in 36 of these cases. It then is a more tedious & dangerous labour to the mother

If rotation occurs it has to pass through 3/4 of a circle

2nd. If head with long diameter in left oblique diameter - There is no good from interference

3rd. If long diameter be in conjugate of brim - There is seldom any need to interfere for in such cases the head is quite small.

In management of these cases see Table

1. 4th presentations of head - Normal is vertex presentation if it differs it is abnormal. Usually there is either a narrow pelvis or a large head & in these cases it is better that the occiput should present Presentation of side of head or ear is just an exaggeration of the 4th position. Occiput presentation requires little interference. In face head presentation we

feel margins of orbit. Labour will be long & will probably require interference. They are very difficult cases. Ch may flex & change into a face or a vertex presentation. If you can push back the forehead & make it a vertex presentation. Use forceps to assist you if required. Do it as early as possible. Some push back the head, turn & make it a footling presentation.

Face presentations are far more common than vertex in 1 in 1½ cases. It may be situated before labour sets. Of many causes assigned. Most important are the tilting of head of child against side of pelvis because getting caught against brim of pelvis, in which cases the child lies obliquely. Often the head is very long behind that is the occipital part or dolico-cephalic skull. This shape tends to cause extension instead of flexion. One in four of face cases the pelvis is narrow. In these cases the face may lie in the oblique diameters of the pelvis with chin often backwards & forwards & we describe these cases according to position of chin

Set of movements in face presentation viz 1st Extension 2nd Rotation 3rd Flexion 4th Rotation. Hence these movements are very much reversed in order. The extension is very great 2 Rotation is of the chin forward (and the occiput as usual)

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6). Face Presentations *53

Face nature relative frequency - causes

a. Premature position before labour

b. Secondary form

1. Occiput labeling against pelvis

2. Obliquity of the Uterus

3. Long shape of head

4 Narrow pelvis

Mechanism - two positions at term

a Chin to right Ilium (right cheek presenting)

b Chin to left Ilium (left cheek presenting)

Frequency of each

Right mento iliac to left mento iliac as 3 to 2

Rotation - chin always escapes from under pubis

Alleged passage with the forehead towards pubis

Change of face into Cranial Presentation

Diagnosis of face - negative characters

Vertex nature rose mouth cheeks & eyes

Prognosis as to duration safety to mother and Child (Some left out here seem) +

Special rules rules for management of cases of malposition

1 The altered relations of the head

1 Avoid rupturing the membranes

2 To use the passages as dilated as possible by relaxants if necessary & particularly by preventing the descent

of a fold of Cervix Uteri
3 Keep the urinary bladder & rectum empty
4 Treat all causes likely to diminish the power of the Uterus
5 Watch carefully the progress of the head emerges in an unusual position
6 As a general rule leave the processes all decorations of the head to nature except
a In Forehead & face presentations not entering the brim
b Imperfect rotation in Occipito Posterior
c Mento Sacral cases

Laborious Parturition

Order II

Necessity Instrumental Aid

Nature of such cases
Their pathological causes
Circumstances by which we judge of the propriety or not of instrumental interference
1 Duration of labour & its stages
2 General obstetric history of the patient
3 Her natural constitution & existing state of health
4 Her treatment & conduct in past part of labour
5 The situation of the head & its impaction and pressure
6 Degree of dilatation & dilatability of the passages
7 Their natural & healthy state as shown by the

dural organs

8. Strength & effect of uterine contractions

9. Condition of abdomen & uterine tumors resulting

10 Constitutional state & strength of patient 11 State of child from auscultation

The following figures in brackets is left out from notes

There is a cross placed on previous page †

Causes of Delay

a Dilatation not easily effected

b Bones & soft parts don't yield so readily

c Uterus acts at a disadvantage

Head a lever of the third order

d Diameter greater

From chin to commencement of hair	=	3 5/8 inches
" " to middle of sagittal suture	=	4 1/2 "
" " to end of " "	=	4 3/4 "
From root of nose nearly opposite to the	=	"
vertex when head is bent back	=	4 5/8 "

Management of Face Cases

Supposed to require active interference

1 Do not use forceps in first stage

2 Cephalic version or rectification

3 Version & forceps

Or interference usually required

For very difficult cases treat by rectification

or as a difficult cranial presentation

Diagnosis Treatment)

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is so as to bring the chin under the arch of the pubes (3) & set a movement of flexion occurs for occiput passes round the hollow of sacrum while chin is held at pubis then forehead vertex & occiput successively over the perineum & the child head is born (4) Then rotation occurs as a movement of restitution. Thus all the movements are quite reversed. These cases are diagnosed from external palpation (not much good) & internal examination Can feel the round globe presenting, feel the parts find nose mouth chin eyes &c. If extension has taken place we can feel chin under pubis

Prognosis - Difficult & long & of danger to both mother & child from long delay

Causes of Delay - Dilation of parts is difficult & the bones & soft parts dont yield readily. The head moulds differently from natural - Caput succedaneum generally formed. If face gets much swollen & disfigured. Also the uterus acts at a disadvantage & a great amount of its force is lost. But chief delay is because the larger diameters of the child are prevented & remain so. See table for lengths of diameters.

Fourteen per cent of facial cases die (child)
Management - Some say turn & make a foot presentation
Others say treat the head itself. Others say use the
forceps & lever. But in simple case of face presentation does not need any interference. Not unless there
is some malformation of pelvis or very large head.
The labour is more dangerous & more tedious
Head presentation complicated by descent of arm with it
or the hand - can sometimes replace the arm. May
have the foot or even both arm & foot with the head.
presenting. Occasionally the arm is situated behind
the head & in these cases the child can not be born
naturally. We can only diagnose this by passing the
fingers past the occiput & feeling the arm there &
here must then replace it or otherwise we must turn
For rules for managing these cases of Malposition & Mal-
presentations of head see the Table. - Necessity is seen
in possible cases of forehead & face presentations & also in
case of chin presentations

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Beginning Instrumental Aid.

Uterine cavity of patient gets shapeless & exhausted
If persons having had child or children without use

of forceps seldom requires them. We must judge of them as from the 10 circumstances given in a previous table. which are

1 If labour lasts very long & patient getting exhausted & pains weak though head low.

2 If she may have had forceps used before

3 Judge of her strength of constitution & the history of her previous healths.

4 Judge from the part of labour she has passed thro.

5 The situation of head & amount of impaction. Never interfere unless pressure is injurious to head or mother's passages

6 Judge of the degree of dilatation & dilatability of passages

7 Morbid state as shown by discharges

8 & 9 Strength & effect of pains & condition of Uterus.

10 State of mother & state of child. If mother in danger her pulse rises, but if danger to child its pulse falls just the reverse

* 5/4

General Rules for Non-Interference

Trust to nature if

1 The uterine contractions still advance the head

2 There is no injurious pressure from head or any symptoms of irritation in the passages

3 The whole general system is not much disturbed

There is no immediate danger to child

Interference under the Reverse

Combination of circumstances

Question of comparative danger of early interference or delay? Osborne

Wait till the powers of nature are absolutely exhausted? So Osborne says

Interfere rather to work this state

See what nature can effect & not what she can endure

The question of duration of labour as influencing the attendant dangers. Longer the labour after a certain time the greater the danger

Statistics Regarding Duration of Labour

Maternal mortality attendant on parturition increases in a ratio progressive with increased duration of labour

Infantile mortality attendant on parturition increases in a ratio progressive with increased duration of labour

Mortality to infant & mother is tenfold greater in prolonged labours than in labours terminated in 12 hours & fiftyfold greater in labours prolonged beyond 36 hours than in labours terminated in the first 24 hours

Liability to morbid complications connected with labour increases in proportion as labour is increased in duration

5 Liability to febrile inflammatory affections in puerperal state increases in proportion as the previous labours have been prolonged

6 These complications become not only more frequent but increase in danger & fatality

7 The child for some time after birth is more liable to disease & death in proportion as labour has been longer or shorter in duration

8 Mother is more liable to suffer under diseases of the Uterine system after long than short labours

9 Some obstetric complications which in their causation are independent of length of labour are regularly liable to occur with short as with long labours

10 If not labours are longer in duration than subsequent ones & in proportionate degree more fatal in effects to mother & child & more complicated

11 Ch ale births are longer in duration than female births & in proportionate degree more fatal in their effects to mother & child

12 The danger of instrumental delivery depends more upon the previous length of labour than upon the operation employed ✻ 5 12

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55 Comparative Value of Mother & Infant
Proportion of laborious labours requiring instruments
Modifications of instrumental interference
Kinds of instruments used in cases
Where there is an actual disproportion between the
contents & the passages
1 Fingers
2 Fillet
3 Forceps
4 Lever
Dangers of the Accouchement
How used & applied
In what cases
Fillet or Lace
History. Forms. Modes in which it was
applied & used
Objections to its employment & manner of action
Forceps
Their native improvement in practice effected by them
History of their introduction. Chamberlen. Paris
cases 1670. Giffard Chapman Baillie Smellie Leveret
Division of modern ones into long & short forceps
British short forceps
Straight & curved
Advantages & disadvantages

Width. Fenestra. Thickness.
Material. Covering of blades.
Edges. Forms of handles, hinges, joints.

Modes of action of forceps.

1. By direct traction
2. By alternate lateral lever motion
3. By compression of fetal head
4. By elongated action
5. By changing the position

The degree to which compression may be carried

Modes of application of short forceps to fetal head

Indications for the use of the short forceps

1. When for the safe delivery of the female the head in relation to the passages requires:
   a From size an additional compressing & extracting force applied to it
   b From malposition these combined with a rectifying power
2. When the uterine action is insufficient safely to complete the ~~labor~~ case
3. The immediate delivery is required from some complications threatening the life of the mother
4. Where there is immediate danger to the child & the passages are sufficiently dilated or dilatable

N.B. In all cases the fetal head must have entered

or nearly to entered the pelvic cavity

General Preliminary Rules regarding the use of the short forceps

1. Be perfectly assured of their necessity
2. Always tell the relatives (gent.) the patients
3. Be cautious in your prognosis regarding the infant
4. Beware of employing them before the Os Uteri is fully dilated & the first stage undoubtedly completed
5. Always empty the rectum & bladder before using the forceps or any other operation
6. Place the patient on her left side having her body across the bed & her nates at the edge of it
7. Warm & grease the instruments & if necessary lubricate the natural passages
8. Assure yourself of exact position & locality of head. How?

Special Rules for the Introduction of the Forceps

1. Examine & do not use force on the instruments & withdraw particularly when any great resistance offers itself
2. Keep its point always in contact with foetal head
3. Introduce each blade so that its concavity adapts itself to the convexity of foetal head
4. Join & apply each in the pelvic axis
5. Introduce the instrument during the intervals of pains & always suspend the attempts during a pain

6. Introduce the first blade
   a. The single blade of Dr. Ziegler's forceps & place it superiorly
   b The blade whose lock looks anteriorly on handles short & crowed forceps & place it inferiorly
7. Hold the first blade in the right hand using the left hand as a guide
8. When fully introduced keeps it in situ with the thumb & 1st last fingers of the left hand & use again the two first as a guide
9. Introduce the second blade first horizontally & then adapt it so that it comes into complete antagonism with the first
10. If it be found not to be adapted to the first do not withdraw the second but by changing its position somewhat with the fingers, adapt it properly & it will lock readily

Rules for Working the Short Forceps

1. Only act during a pain & if no pains are present imitate nature by only working at intervals
2. Use the instruments as extracting forces combined when necessary with a lateral pendulum motion.

The proportion of labours requiring instrumental interference varies according to the practitioner, some using them 1 in every three cases others as seldom as 1 in 150 or 160 cases. There is great modification of instrumental interference & various are the kinds of instruments employed, but when there is no actual disproportion between the infant & the passages the fingers, fillet forceps & lever may be employed

Fingers - Must apply them with those of one hand internally & those of the other other posteriorly just use those of one hand & try & pass them behind the carpal to the chin & making traction thus relieve & help on the head

Fillet - this may consist of one blade, or of one blade opening into two, or even three by means an arrangement at the handle externally after the blade has been inserted singly. It is used to make traction with. It is more difficult to apply less useful & more apt to cut the mother, or child's head than the forceps of made of steel. The fillet is also worse to apply. It may consist of silk &c, leather, cane, whalebone steel &c

Forceps - Before there introduction, the women midwives who then had mostly the management of cases, if such as really required instrumental

interference they sat calmly by & saw their patients perish. But the introduction of forceps altered this. The first of them were Tabarin & crude they were consisting of a handle with two chains attached with an hook at the end of each which was hooked into the head. But the real forceps were first introduced by the Chamberlins a father & two sons who were the Court practitioners in London (Probably the Salic). They practised successfully with them for long & said they had discovered a patent to extract large headed children or children from small passages. One of these Chamberlens went to Paris & offered to sell their secret for 1000 crowns to the Medical faculty, but first he had to operate on a case they found him & he failed (probably a case with rickety or Malacosteon Pelvis) & hence he returned with his secret & minus the 1000 crowns. The secret perished with them, but long after their case of instruments was found in an old pearl of Morton Hall which was being pulled down. They forceps consisted of two straight blades & acted like a pair of scissors both blades being fastened together & working on a pivot. They were used in Paris

days. Ford was eminent in their use
Modern forceps are divided into long & short ones.
& they differ in shape in different countries.
The British short forceps are of two sorts one with
straight blades & the other with curved blades. They
are Smellies Forceps. They vary from 2 to 3 inches in
length They are not solid in blades but contain a
fenestra & hence must shields break less. Length of
blade of short forceps is about 4 inches that of long
about 11 inches. They are made as thin as possible to
be strong enough. Some as Smellie did cover the
blades with leather &c, but this is of no good & only
increases their thickness. The edges should not be
sharp. The tips of blades vary in distance & amount
of bend of blades vary but gen^y. are about 3 or 3½
inches apart at widest place. The handles vary
in form some being plain, some with sort of bars
& depressions for the fingers to take good hold of
Little bone advocate scarcely any handle so as not
to allow of much lever power. The fingers or
locks vary in different countries in England the
pelvic lock is always used & the two forceps are
just alike & short & straight but consist of a right
left & curved. In France the forceps consist
two blades & are fastened together after insertion

by means of a screw joint & the handles are quite different from the English. The Germans who were the latest to adopt the use of forceps use the Bramenghausen locks that is the forceps has a button on it with a shank & the other a slot which the shank of the button fits into.
In short forceps the shanks of blades springs from the locks but in long forceps (which are curved to adapt them to shape of pelvis) there is a shank between locks & shanks of the blades. There are all sorts of modifications, for instance one set of forceps which divide at the shanks so as to go into less space & are joined together for use by means of slots & brass ferrules which slide up over them. I must not omit to mention the Jaeger forceps. These consist of one blade in which the fenestra extends down the shank which is thus open & the other blade has to be passed through it & then is locked. This form is often very useful

Actions of Forceps - Acts in five different modes 1st With these we must make direct traction if they be not different use 2nd That is a sort of lateral lever like motion 3rd pendulum motion as it is called advancing them first one side of the head a little &

Then the other will a sort of see saw motion 3rd
they act by compressing the head & thus lessening it
there are various opinions as to amount of compressing
the head will bear & hence the variation in distance
between the blades of forceps at widest part. Some
say it may be compressed as much as an inch without
danger to the child, but no authorities say more
than half but less, & this depends on which diameter
of the head is compressed.

4th The forceps act dynamically by imitating the
means to increased action, hence we often find that
the next pains after applying them are far stronger.

5th They also act by changing the position of the
head of the child & may take the head which has
been impacted through all the movements of flexion
rotation extension & restitution just as nature would.

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Rules for working the short forceps (continued)

3 Examine the instrument after each traction & replace
if it has in any degree slipped

4 Change the direction of the extraction in accordance
with the axes of the pelvis

5 Bring the head down always according to the mod-

mal mechanism of the particular position. b expect transverse if occ cases

b If the head be impacted you may require first to free it by elevating slightly.

7 Support perineum carefully with left hand

8 Make the head descend & pass slowly over the perineum Allow the mom itself as often as possible to complete the expulsion of the head & always the body

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If no indications for use of short forceps (H) see the table previously given

General Preliminary Rules regarding use of H forceps

1. Dont use them without they are certainly required.
2. Always tell the relatives & give them a good reason for their use. Never use them secretly as some practitioners do.
3. Mind what you diagnose as regards the infant
4. Never use forceps before os uteri is fully dilated & first stage of labour over
5. Empty the bowels & bladder always before this or any other obstetric operation
6. Let her lie across the bed in the ordinary obstetric position with her nates at the edge of the bed. In Germany they lie on their backs

this position is sometimes useful & correct. The lithotomy position.

7. Warm the forceps in hot water & grease them with oil or butter before use

8 First assure yourself of the exact position of the child's head by feeling for the fontanelles sutures &c

General Rules for Introduction of Forceps

1. Insinuate the blades well. Don't use any force & if a fold of vagina hinder draw forceps blade back & get it by always keeping the point of blade applied to the child's head & gradly slide them along with their concave surface applied to the convexity of child's head.

2. Enter & apply each blade in the axes of the pelvis the short forceps (straight) only pass in the axis of the outlet

Introduce forceps during intervals of pains & if a pain come on stay your introduction or you may lacerate the mother's parts

(3). In shelling short forceps take the left blade in the left hand & introduce it in the left side of the pelvis. Then take the right blade in the right hand & at first introducing it at

right angles to the left, holding the other blade with the thumb of the left hand guiding in the right blade with the other fingers of the left hand. Then gradly slide the blade round from the back to it to apply it to the side of the head. Then taking one handle in the right & the other in the left get them locked. If it dont adapt itself to the first dont take out the second but get it adapted by changing its position & then it will lock readily.

Rules for working the Short Forceps

1. Act only during the pains & if there be no pains simulate them by working only at intervals
2. The power you require is only that of traction but if this is not sufficient give the blades a lateral pendulum motion from side to side not backwards & forwards.
3. Examine & see if forceps remain in place after each traction you make
4. If head is brought up & not gone through its movement take it through them with the forceps
5. If head or any part get impacted elevate & free it with the fingers or a lever.

4. Support perineum

5th As the head distends & pass slowly over the perineum. At both of head down make traction with the strength of the pain but as the pain is dying away. Allow the uterus to complete the birth of the head as often as possible, but always the body, as you leave the uterus work in the third stage, & it is always as well to give a dose of ergot.

The forceps are most useful with cases having the head in the occipito posterior position for in these cases the curve of the long forceps acts in opposition to the occiput of head & hence we have to extract with another pair of forceps, but use of Zeigler's obviates this. Introduce the solid stemmed blade first into hollow of sacrum & then move it round to the right side. Then pass the fenestra of the last over the handle of the solid blend passing its blade into the hollow of sacrum & gradually sliding it to the left side & bringing it into apposition with right blade

*5th

Indications for the Use of Long forceps

1. When the foetal head is arrested at the brim from a slight contraction of the brim

b Large size of the head
c Malposition of the head

2 When the head being fixed at the brim & the uterus urges it most immediate delivery is required in consequence of

(a) Total inertia of Uterus
(b) Sudden & dangerous complications on the part of the mother.

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Difference between Long & Short Forceps

a In their construction
b In their manner of action
c In their place of application
d In their mode of application

The short forceps are applied in relation to infants head
The long forceps are applied in relation to the mothers pelvis
N. B. Forceps with unequal blades

Observations regarding their mode of application Hamilton &
Cautions in regard to introduction of Long Forceps
1. Direct the instrument in relation to axis of brim
2. Guard the os Uteri carefully
Cautions in regard to mode of extracting the Long Forceps
1 Employ them principally as a tractor
2 Be certain & pull in first backwards as nearly as possible

in direction of axis of brim

3. In pelvic contraction & malposition of head take off instrument after head in pelvis

4. Where speedy delivery required & no contraction may retain same hold till head is born

5. If cannot move head may have an instrument to be used as an extractor after perforation of head

Dangers attributed to use of forceps

a To mother

b To child

*5th

Long forceps are to be used when head is arrested at brim by slight contraction, or from large size of head or from malposition of head. Or if the head be still at the brim & the membranes be burst may have to use them from loss of uterine powers or from sudden dangerous complications on part of Mother.

Short forceps have shorter blades genly. not curved (may curve not like long) narrower blades & not so powerful handles. The short are only to bring head through the outlet when it is low down & hence direct traction only is required, but the long act downwards & backwards & after forwards

The short forceps may be applied either blade first & on either side, but long forceps are right & left &

must pass left in first instance then pass in right at right angles to left into cavity of uterus & then move it round into apposition to first.
Short forceps are applied in relation to infants head
the long in relation to mothers pelvis
Some forceps have unequal blades as Radford's.
Some have applied them anteriorly & posteriorly as
to malformed head this is a mistake & Sadlier position
is the best & proper one that is right & left
In introducing long forceps - Finger warm in relation
to vagina of uterus & passed
you must take hold of any part of os uteri as has been
done tearing uterus & peritoneum &c. Use them
principally as a tractor & pull the handle backwards
towards perineum at first in direction to vagina
by & by. take off instruments when head gets into pelvis &
if possible let uterus complete the labour if not
in speedy delivery be required keep the same hold
& on birth of head bring the handles gradually
forwards towards pubis on account of curve of forceps
as head passes over perineum
If cannot move head may use a perforator & open
head & then extract it with an extractor
Dangers from forceps - Tearing os & laceration of
mothers passages, uterus breaking

through the vaginal walls from their bad & unskillful use, but there may be some bruising & laceration of parts (but less than head might cause) in skillful use of them & almost always more rupturing of perineum & danger to child - In genl. from bruising of its head which by to great compression may be utterly crushed. But ordinary use of them does slight damage to child's head & as a rule it genl. soon disappears.

The Vectis or Lever ✻ 58

Its history first made public in 1753

Different forms & powers of Vectis be used as

1 Lever of first class
   a Vectis below as a fulcrum
   b Operator's hand as a fulcrum
2 Lever of 3rd. class & used as a simple extractor
3 One blade of forceps, the operators hand serving as the 2nd. blade

Instrument should be curved & used as an extractor

Cases proposed for the use of the Lever

1 All common forceps cases
2 Cases of slight contraction of brim
3 Cases of malposition of the head especially
   a ✻ occiput presentations
   b ✻ face presentations

Rules in regard to employment of Vectis

1. Same preliminary measures as for forceps
2. Same rules for introduction of instrument
3. Place the instrument over the occiput or mastoid process when the brim & in malposition of head
4. Place it over face or chin when used as blunt forceps & head on perineum
5. Use it as a lever of the third kind
6. Carefully avoid ever making pelvis a fulcrum
7. Act only during a pain, unless there are no pains

Use of Suction Tractor

Principle of atmospheric pressure
Forms of the air tractor Double cup?
Its powers & applicability to the head in breech

Laborious Labors

Subclass II

Instrumental Labors

Order 2 Destructive to child

Definitions Operations proposed in this order
1. Craniotomy Embryulcia
Perforation & Crochet Cases
Terms all used synonymously

Indications for the Operation of Perforation

1. When such disproportion between the passages & the child exists that the latter cannot pass safely for the mother unless it be diminished in volume
2. When in a different case the passages are too swollen & inflamed for the use of the forceps
3. When the forceps long & short might be used but Embryulcia is preffered because child is dead

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The Vectis or Lever

Is another midwifery instrument. It is said that when Chamberlen went to Paris to sell the secret of his forceps the having failed there went & offered it for sale to the Amsterdam Medical Society. Whether he sold it them or not is not known but if he did he only sold them half of it, for only the lever or vectis has been used in Holland up till lately. The Amsterdam. elled. Soc. sold their secret to its members always for a sum of money till two members revealed it, the Vectis in 1753 & made it public.

The Vectis is of different forms but consists of a handle with a blade like half of a pair of forceps. Some have a hinge where blade joins the handle & fold up there & thus when the practitioners went about they always carried a lever in their pockets & everybody knew what

caused the projection in their trousers pocket.
It may be used as a lever of the first class. At one time they used to make the pelvis their fulcrum, but must use our hand always for the fulcrum
It may also be used as a lever of the 3rd class being used then simply as an extractor
It should be consider as one blade of forceps sometimes using the hand as the other blade
It should always be cursed like the blade of forceps & used as an extractor. It may be used in all simple would be forceps cases 2 Where there is only slight contraction of the brim. 3 In some malpositions especially in forehead & face presentations. We may often change a bad position with vectis & then extract with forceps.
Rules for use of Vectis - 1st Warm & grease it & introduce it just like a forceps blade the same rules applying for both. Let the blade go over the occiput or mastoid process if head be at brim & in any malposition at brim. Let it lie over the face or chin if the head be on perineum & you are using it as you would the short forceps. Use it as a lever of the 3rd kind mostly but whatever you do must you don't make the mothers pain a fulcrum for it.
Use it only during a pain, that is only assist nature unless there be no pains in this respect it differs from forceps.

Air or Suction Tractors

Sir James Simpson tried to work this idea out but though it did in a few cases yet the difficulty of applying them to the child's head could not be overcome. The instruments acted on the principle of the common leathern sucker with which boys so commonly lift stones. It consisted of a double india rubber cup with a barrel above contain an exhausting pump with a piston which had a small brass handle outside

It could only be applied to the head or the breech & there applied it acted strongly, the air being sucked out of the cup by the exhaustor. But they are not satisfactory & have not come into use.

Lecture 59 Feb. 18th 1878

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Indications for the Operations of Perforation

1. When such disproportion between the passages & the child exists that the latter cannot pass safely for the mother unless it be diminished in volume.

+ 3 Also given 3 pages before

Signs of death in the Child

a. Scalp is emphysematous & crackles
b. Loss of pulsation in the cord
c. Absence of beating of the Foetal Heart

Danger for Mother

Three stages in the Operation of Embryotomia

a. Perforation

b. Breaking up of Cranium

c Extraction of Dismembered infant

Instruments required

Perforator

Spoon or guarded crochet

Guarded forceps

Instruments same as forceps

I Perforation

General rules for performing Perforation

1 Introduce perforator with right hand using left as guide & guard

2 Perforate a parietal bone not a suture. Why?

3 Take care to place the perforator at or against the part, at right angles & not obliquely.

4. Effect the perforation by a screw rotatory or boring motion

5. After the perforator has sunk to the hilt open it widely & cruciately

6 Advance the instrument into the Encephalon & break up the bony base of the brain

7 Remove with great care the detached portions of bone

II Breaking up of the Cranium

Different Methods of.

1. Craniotomy

Instruments Lyons Forceps

Craniotomist

Rules for Operating

1 Pass instruments with one blade inside the skull the other between the scalp & skull & break off fragments

2 In proportion as the disproportion between the head & pelvis is greater, break down & remove more & more of the Cranial Arch

3 In breaking down separating & removing the Cranial Bones do not tear the scalp but preserve it as a protection to the soft parts against the edges of the bones

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In Laborious cases of Labor class II order 2 the operations performed are those of Craniotomy & Cephalotripsy. Preparation in Crochet Cases.

Indications for Craniotomy - See rule 1. Craniotomy is admissable when diameter (conjug) is from 1¾ to 2½ in & below this we shall not be able to extract the child even after breaking down the head. Cases may be met as bony tumours, cartilaginous tumors, Rickets Malacosteon, narrow passages, & very large head &c.

2. When forceps would be efficient but the fœtal parts are too swollen & inflamed to risk their use

3 When the child is dead & loss of pain & when forceps long or short might be employed, but Craniotomy is preferred

Signs of Child's death - Desquamation of skin of head scalp emphysematous, & often crackles of pulsation of cord. No fœtal heart beats Escape of the contents &c.

It becomes a matter of saving the mother & danger is greater to her the longer we delay the operation & it is more humane to kill the child quickly than to let it be gradually crushed to death by the uterus In this operation the deaths are about 1 to 5.

Three Stages in the Operation of Craniotomy

1st let friends know & put the patient under chloroform Preliminaries required are just same as for forceps.

1st Perforation - 1st let someone hold the child's head from above the pubes so that cannot pass up into the womb. Have a basin of sand ready for blood brains &c. Make your final examination. Find the promontory of the Sacrum (this has been attended to before now) & make all the parts & positions of the head & also define the Os Uteri clearly so

as not to injure it.

Perforators of different kinds - as a lancet in a sheath of brass out of which it is shot on applying it to the head. One like a canula & trocar with a hook. But these tools are not satisfactory for we want to make a large opening In France & Germany they much use an instrument like a Trephine it makes a clean opening without ragged edges at least it is claimed to do so but does not always by far. The British ones are the best & are such an improvement of the Smellie. It consists of a spear shaped head sharpened at the edges & acts like a span of scissors the handles kept apart by a spring & at the end are united by a jointed bar

Apply it flat against the parietal bone & then perforate the bone but the suture, so you dont at all break down the bones. Then you dont place the instrument obliquely against the skull but at right angles to it Press it in with a boring sort of motion, then open it out Laterally by pressing the handles. Then turn it round & open it in the antero posterior diameter & turn it round & then you have made a large opening in the skull. Then pass the instrument

deeps into the head & turn it round so as to tear away all the membranes of the brain & also to kill the child quickly for a living child will not macerate & crush together like a dead child. Feel with your fingers round edge of hole in skull & remove any bits of bone either with your fingers or dressing forceps or Lyons Head. scissy forceps for these sharp bits of bone now constitute the danger. Bone now clean out the skull with water injections, then use a large spoon

II Breaking up of the Cranium - Cranioclasty has been the operation used up till lately; that was breaking it down bit by bit with Lyons forceps. Dr Davis of London has invented several kinds of forceps, one an bites down bits and bits of bone. Many sorts of crochets or Forceps. Many practitioners still use these means. But now either a Craniclast or Cephalotribe is used

1 Craniclasm - Craniclast has two blades & handles like forceps. One blade is solid & other hollow & receives solid one & is edged The Cephalotribe is a large massive heavy double bladed & handled instrument. It was invented in France by the younger Beadeloque.

In using Cranitomy Forceps pass the blade outside the

Skull & other between scalp & the skull, & proceed to break off fragments & break down the Cranial Arch till it is small enough to pass. Tear the scalp as little as possible so as to protect the mothers soft parts against the jagged edges of the Cranial Arch. If all these rules are the previous table.

A woman was shown at the Medical Society with an old fracture of the skull at least signs of it once. This was caused by her being delivered by Craniotomy Hyperthesis Parke, but she died after it. Prof Simpson told of a Welsh practitioner who performed Craniotomy in a difficult case 20 miles from any help with a knife blade & a hook made at a smithy near by & thought all the child was born alive

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2. Craniotomy

Instrument the Craniotomist

Rules for Use

(1) Introduce the solid blade into the interior of the skull & pass the penetrated blade over the occiput so as to grasp the foramen magnum

(2) By a twisting movement fracture the occiput & loosen its attachments

(3) If necessary apply the blades to the right & left sides of the head & fracture the parietal bones

(4) In brow presentations apply over the frontal bones.

3. Cephalotripsy

Instrument the Cephalotribe

Rules for Use

(1) Pass apply & lock the blades according to the rules for the introduction of the forceps

(2) Let the blades grasp the foetal head well forwards towards the symphysis pubis

(3) Work the screw so as to approximate the blades & compress & break up the head & face continuing the screwing action until the handles of the instrument are brought into contact

(4) Take off the instrument by undoing the screw if there be great disproportion between the head & the pelvis: reapply it so as to seize the head in a different direction & again crush

4. Craniotresia

5. Craseurent, Craseur, Saw, Forceps

III Extraction

Should we proceed to it immediately - disadvantages in difficult cases

Instruments &c

1. Hooks, crochet

2. Cranioclast

3. Cephalotribe

Rules

A. General

1. See that the scalp protects the edges of the bones as much as possible
2. Watch the progress of the fractured bones through the pelvis with the left hand
3. Work only during a pain or at intervals of no pains
4. Accommodate head to the form & axis of the pelvis
5. In most difficult cases after the birth of the head may require to eviscerate the thorax & abdomen.

B. Special

I. After Craniotomy

1. Use the crochet inside the skull wherever you have a proper hold
   (a) In simple cases on the parietal or temporal bone
   b. In more difficult cases in foramen ovale or orbit
2. Test the firmness of your hold before using great extractive power
3. After head is born apply towel round it & the neck to pull by.

II. In Cephalotripsy

1. Make careful traction after each complete compression of head
2. After the head is born retain hold so as to make traction for delivering the body.

3 When the evacuation is required apply the instrument to the bregma to crush & extract it

Subsequent steps

Prepare the Child

Attend strictly to the mother guarding especially against

(a) The shocks of the operation – if long use opiate & stimulant

(b) Inflamation & fever following

(c) State of bladder & genital canals

d Examine vagina & see if no specula or laceration

Risks of the Operation. *60

For applying Cranioclast pass the solid blade through the hole in skull passing the other out side the skull then by squeezing it & then twisting it from side to side thus fracturing & reducing the head. We may change our position of hold as often as we please but should first place the blades so as to be over the Occiput

The Cranioclast is preferable to Cephalotribe because it is smaller lighter less bulky & consequently it is much easier used inside the skull & also it disfigures the head less. It may also be used as a tractor

Cephalotribe - Said not to endanger the mothers parts should perforate before its use. It was great ly used in France & there it was invented by Beaudelocque & it is still the favourite. It is in common use in Germany but one by Jeanjoni. But it was fought shy of in Britain till a few years ago. But the ones used in Britain are not so formidable as the Continental ones. They are like two very strong forceps blades without fenestra slid & locked on one surface to hold by, the lock is the handles. The handles are worked & blades approximated by a screw rack at the handle & must screw it up as far as we can. For rules for working to see Table

In going into practice supply yourself with the Craniotast & the Cephalotribe & always operate with them & give up the inferior Craniotomy

Splenotresis - Bits are drawn out of the skull by the Trephine at different places & then a pair of crushing forceps are used to compress & crush the head but this instrument has no screw by it is worked by the hands

In Germany a forceps with a sort of saw was used, this Fr. Ramus modified thus by using the chain serascur. Valentine it a pair of blades with sharp knives inside which cut into the head

III Extraction

But as a rule delay after having crushed sufficiently but make traction with the instrument at once. Sometimes it is best to wait a little for the congestion & swelling of passages to subdue & it tends to restore action of uterus, also head gets softer & laxer & more moulddable after it has been dead some time. But as a rule extract immediately

Extractors - Midwifery forceps often do. Sometimes with the fingers alone passed into the hole in the skull. But these are easier cases. For worse cases, sharp hooks & blunt hooks some curved & others (best) straight. To use hook into foramen magnum. Some are single crochets & others double crochets 8. One with two hooks at top which on pressing the handles together are sent into the head Another has hollow blades studded with teeth. Also Craniotast & Cephalotribe which are both most powerful. Whatever you use see the scalp which is left covers the edges of the bones. This is one of the advantages of the Craniotast it does not tear away the scalp. Feel the progress of the bits of bone through the pelvis. Work either with the hands, or if none cut instruments. Bring the head through the axes of the pelvis as in natural labour,

adapting the narrowest parts of the head & passages.
After head is born forceps may be too small to allow
of passage of the body & we must always be
prepared to evacuate contents of chest & abdomen.
If we crochet formily on skull, no 9 cranial diagram
to scale on side Orbit & rest your hold before using
force. After birth of head apply a towel (to extract
body) to head & neck for traction.
Don't show the child to mother if it has been delivered
by Cephalotribe, but send if Craniotast for head can
then be much improved
Attend to Mother & Guard against - Shock by giving
opiates & stimulants. Inflammation & fever as puer-
peral, from absorption of septic matter for this is
one of the great causes of death in these operations
Be sure the vagina be carefully washed after the operation
& expect if the child has been dead some time.
Mind that the bladder & genitals are uninjured &
acting their duties efficiently. Carefully examine the
Vagina & see that there be no sprains or lacerations
if so attend to them at once
Risks of the Operation - Generally from delaying
the operations too long after they are found requisite

Lecture 59 Feb. 20th 1878

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Cesarean Section on Living Mother.

In imitation of a rare termination of labour on the part of Nature

Ancient & Modern History

In reputation and rare patient Michaelis

Indication of Cesarean Section

Only when the pelvis is below the diameter of

1½ or 1 3/4 ins antero posteriorly

3 ins. or 3 1/4 transversely

Point of performing the operation

Principle points to observe in operation

Instruments

Heated knife - Position

Situation of Placenta

Locality of incision in abdominal walls

" " " " uterine walls

Speedy extraction of Child

Full contraction of Uterus

Avoidance of Peritoneal effusion

Opening up of Os Uteri

Risks - Shocks - hemorrhages - secondary pelvi-cellulitis
Inflammation &c

Cesarean Section after death of Mother

How long may a child live after the death of mother?
Lex Regia of Numa Pompilius
Decemvir law of 12/450
Caution in regard to actual death of mother
In cases of doubt proper delivery by natural passages
Sigault Operation
Cessation of the pelvic joints in human labour
Proposed as an operative method by the Midwife
Sigault in 1768
Results in 36 cases - lost 14 mothers & 18 children &
incontinence of urine occurred in 5 cases out of recoveries
Performed unnecessarily in some cases as by Sigault
It has been performed in only one case in Britain
As an operation it is insufficient in bad cases to increase
the conjugate diameter
To increase the Conjugate diameter by
½ in. symphysis has to be separated 3 inches
1 in. " " " " " 2 inches
3 lines " " " " " 1 inch
It is of no use in triangular deformity of the pelvis
Proposed new method of section of pelvis - Pelvitomy.

Would not cutaneous section of the Sacrolic ligaments have cranioteny in some cases of contraction of the outlet?

Proposal to control the growth & size of the Foetus

Objections - Phthisis, Twisting &c

Induction of Premature Labour

Its Object - Origin - History in Britain

Its opposition on the Continent

Deaths mostly from co existing disease.

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Cesarean section often mentioned in the Classics.

Henry VIth out of Elizabeth of York. Macduff, David IInd Grandson of Robert Bruce & many other historical personages were so brought into the world

5 7 P cent of mothers die. More likely 2/3 of mothers die 35 P cent of children die.

Operation has been more frequently performed on the Continent than in Britain & also with more success.

It has been performed as often as 3 times on same person & 11 times on one woman who died

Diameters indicating this operation are 1½ or 1¾ inch by 3 in in 3¼ transversely

Contraction of Pelvis, Bony tumours & sometimes

Caesarean may all cause the operation to be performed

When a clear indication to operate, when should we operate, if a choice? Should we wait till full time of pregnancy? Operation 2 weeks days about a fortnight before & then you can choose daylight & make all careful preparations & also bring on premature labour, & there will also be less hindrance of healing from degeneration of muscular fibres.

Best to wait till full time if possible, & even then wait till uterus has got in full & powerful action & then operate before rupture of the membranes, for every hour after their rupture makes it a far more deadly operation, they become about 2 to 1 deaths after waiting 1½ hrs after rupture.

Instruments required — Bistoury for making opening, director, catch forceps for arteries sponges, cloths, sponge forceps, scissors, needles & sutures for closing wound.

The room opened & warmed

The patient on a table at window in a good light. All else a final examination always before operating. Case of malaccotion in which Cesarean was about to operate, he in making his final examination found the bones were soft & intro-

the hand & knuckle & did not meet section thus.
Peel placenta only by bulging
Some make incision:- in median line, others
to one side of it, others through one of the
recti muscles. Others again make it in Mayo's
about to operate for tying iliac artery thus attempt-
ing to avoid peritoneum.
Best to cut in median line, making your in-
cision less in the peritoneum & tying all arteries
as you go on.
Make your incision on a part where the
placenta is not attached. If you come upon it
cut through it as speedily as possible. If membranes
are broken pass hand into uterus & draw out the
child by its legs or preferably the head & neck.
Left up the uterus by its extremities of incision &
hold it up against the abdominal parietes & so
prevent the hyp. amnii or blood flowing into peri-
toneum.
Peel off the placenta from wall & extract
it in the same manner.
Some leave incisions to heal up alone others
use sutures of silver catgut &c. Best to use
silk for deep sutures & sew up the uterine
wall very carefully on account of post partum

hemorrhage. Clean out the peritoneal cavity most carefully & warm sponges cleansing the bowels most carefully & then close up peritoneum & rest of wound as if for Ovariotomy.
Use the catheter for 5 or 6 days
Let patient nurse her own baby child if possible for it causes better uterine contraction
If shock & exhaustion use stimulants
If no hemorrhage - see to, if dont cease open wound again & tie bleeding points
Use ergot against fever & any septic poisonings &c
Also Inflammation & secondary shocks.
Also treat & treat the cause of the operation

Caesarean Section after death of Mother

Child seldom lives many minutes after death of mother.
Those cases said to live hours after are very problematical. Might be living 15 minutes. One case living 23 minutes after mothers death
Out of 331 such operations only 6 or 7 children were alive

Always when a pregnant mother dies try & give the living child a chance & always try first to extract the child through the natural passages, for there is also the chance that the mother may not be dead

Sequillean operation - Proposed about 100 yrs. ago by Sequill. It was to divide the symphysis pubis & thus make a more roomy pelvis. This is natural in the hedge-hog. Sequill first did it himself. It is a formidable operation 11 dying out of 36 cases, & it does not admit of much enlargement of pelvis at brim for pubes have to be separated 2 inches to gain an inch at brim in transverse diameter. It also often leaves incontinence of urine & occurred in 5 cases & something of that sort if recovery takes place. This operation has only been performed once in Britain & in bad cases this operation is insufficient to increase the diameter of pelvis sufficiently & if slight increase be made, it is at the risk of injuring the sacro-iliac synchondrosis. The following is amount of separation required at symphysis to produce certain increases of transverse diameters thus 1/2 increase in dia. transverse

of 1½ inches must separate ant symphysis 3 inches
of 1 inch " " " " 2 inches
of only 3 lines " " " " actually an inch.

It does not increase the conjugate diameter thus used. It is of no use in triangular deformity of the pelvis as that from rickets.

Pubiotomy - Is a new method proposed. The idea

of it so to divide the bony pelvis at each side by cutting through the Rami of the Ischium.
In some cases of contraction of the outlet the cutting of the Ischiatic ligaments might avert the operation of Craniotomy or Symph.
From long time back physicians have again & again suggested the idea of checking the growth of the child in utero & trying to keep it small & puny. But if tried by withholding food, the child will thrive & grow while the mother may be starved to death. This is proved in cases of phthisis & pregnant vomiting, in which cases the mothers have been emaciated & reduced to mere skeletons & still given birth to fine fat plump well fed children. So this is a failure.
The so much "Coup de Grace" - may sometimes be necessary. This consists in well lubricating the hand & forcing it into the pelvis. When get command of the cervix, introduce two fingers by gradual insinuating force, if you cannot make 3 in it slits in an organ of 6 or 8 cm, then insert one finger work it round & round dilating cervix till you can get in two fingers then you attain command of the cervix & dilate it until you can get in your hand, pass it into the womb & turn the child & thus deliver. This is often successful.

Law of Numa Pompilius - It was an old Roman law that no pregnant woman should be buried without Cesarean Section had been performed on her there was a somewhat similar law passed in Sicily in the year 1740 -

In Labour in the human subject some a separation of some of the pelvic joints occurs naturally.

Lecture 60 Feb. 21st 1878

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Induction of Premature Labour (Continued)

Comparative fatality of the operations for which it is substituted.

Safety of the operation as regards the child

Viability at the 7th month - number saved

Forces of danger to child

1 Preternatural presentations

2 Miscalculation of term of pregnancy

3 Rupture of the membranes

Classes of Cases requiring this Operation

1. Bony pelvis contracted from 2½ in to 3 or 3¼ in. in the one diam.

2. Soft bony tumors of body of uterus or Cancer of Cervix

3. Tumors of the Ovaries & soft parts

4. When dangerous maternal affections are present as

Cardiac disease, Ascites &c aggravated by pregnancy.

5. When dangerous diseases arise during pregnancy & are aggravated by it as
   (a) Severe intractable vomiting esp/y. in later stages
   (b) Albuminuria & its consequences both with fœtus & other children
   (c) Various acute inflammations & other diseases

6. When the infant is habitually too large
   (a) from recurrent prolonged pregnancy
   (b) from recurrent hydrocephalus

7. When the infant is liable to die in the last months
   (a) from Placental disease
   (b) from other causes. Syphilis &c

8. At 4th or 5th month when pelvis too small to pass a viable child

The proper period for operating is the end of 9th month
Cautions as to period - Advantage gained

Modes of Operating

1. By abdominal friction & compression - Failure
2. By Version of Fœtus. Generally kills child
3. Rupture of Membranes - Surest but dangerous to the child
4. Separation of the Membranes around the Os & Cervix Does not always succeed
5. Dilatation of the Os with Sponge tents - indian rubber bags

6. Dilatation of Vagina with Sponge or Bag
7. Injection of Warm Water
   (a) Into Vagina
   (b) Into Uterus
8 Injection of Carbonic Acid or Common Air into Uterus
9 Separation of the Ovum from the interior of the Uterus by a round or Bougie
10 Insertion of a Bimi elastic catheter between the membranes & the interior of the Uterus
Results always certain

General Rules & Cautions

1. Assure yourself of its necessity
2. by. (a). Abdomen & fingers
   (b). Result of previous labours
   (c). Consultation with some other practitioner
3. Be careful in calculating the proper period of pregnancy
4. Prepare the patient with purgatives, medicated pessaries &c
5. Watch her diligently from the commencement of the operation till it is all over
6. Start labour by means of intra-uterine

Version or (when indications not urgent) by repeated introduction of finger through Os Internum

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Premature Labour

Sometimes occurs spontaneously or from accident.
First suggested about beginning of last century in London Dr. Hallot bringing it before the Medical Society. First performed in Britain in 1744
It was vigorously opposed on the Continent both in France (where the first operation was as late as 1831) & Germany
In 2000 cases 1 in 4 cases of deaths to mothers & nearly half the children are saved. Such a great contrast with Craniotomy.
The child's head is less, softer, & moulds easier before full term.
The nearer the full term the more satisfactory the present ation, which is a source of danger
If produced before 7th month, the child is scarcely visible. If not called there will be almost all the dangers & difficulties of full time labour
The danger to child from mode of producing labour
Can use this operation if pelvis contracted at brim to from 2½ to 3 or 3½ in in diameter. Also in flat.

Deced & malformed pelvises.

Always make repeated exams. & measurements of pelvis before operating.

Method of measuring Childs head - By Osiander's method of fixing a scale at ends of forceps, but we want to know while yet head is in womb. This we can do to certain extent by external exam & combined internal & external examination.

Also by measuring length of doubled up child in utero & thus judging of comparative size of head.

Observe both degree & form of deformed pelvis.

Also if fibroids of large size & Cancer of cervix

Also if tumours of soft parts.

Also if great danger from maternal diseases as Heart disease, Arteries &c

Also for diseases associated with the pregnancy as very severe ptyalism in later months, & for Albuminuria with Convulsions

Also for various acute hemorrhages & inflammations Placenta Praevia

Also when infant is habitually too large, as from recurrent hydrocephalus or prolonged pregnancy

Also when the child is likely to die in last months as from Placental disease, Syphilis &c when it is required to bring on labour to save the child

Some say at 4th or 5th month when pelvis is too small but this is abortion & not premature labour
Proper period is at end of 9th month
When operate - Not too early. But dont delay too long or no use. About end of 9th month if wait longer risk is that you will have to break child's head. Do it about 230 days from last menstruation
Some modes of producing it, take only a few hours others take days.
Read many different methods - 1 By abdominal friction & pressure. But it is very uncertain & unsatisfactory & may trouble some to patient
2 Administration of Ergotwines as Ergot. But it often fails & if successful pains were so continuous & child often dead
3 Rupture of membranes - Elbacanlys method - Is surest method. But danger of it is the loss of the bag of membranes acting as a wedge & consequently often suffocation of child followed. Some suggested puncturing Vulgarly & only drawing off part of liq. amnii but it is not successful
4. Separation of membranes round Os & Cervix - By passing a catheter round & round on the finger. Pass the finger round & round the Os & repeat this time after time night & morning for a week

perhaps till you have gradually manipulated your fingers in through & separated the membranes. But this does not always produce labour.

5. Introduction of Sponge Tent — This leads to rupture membranes & is liable to hinder descent of the head

6 Dilatation of Os Uteri by Sponge or Bag — As Barnes' Bag. They are good enough after pains started but not to start them. Dor is dilatation will not allow not very good

7. Dilatation of Vagina by Sponge or Bag — This distends the Vagina, opens the Os, but presses on the bladder & neighbouring organs & is very inconvenient method

8. Injection of Warm Water — This is best. Must inject the water just into the vagina so as to relax & soften the parts. Must send the stream against the vaginal roof & not against the Os.

It was often proposed to inject the warm water into the Uterus by a syringe, but two or three deaths in so doing have made practitioners fight shy of this method, though a very successful mode.

9. Injecting Carbonic Acid or Common Air, which

brings about labour from distension. But it is dangerous & Seanzoni's method is not good.

Q. Hamilton's method of introducing a sound into the uterus move it about some what so as to separate the membranes. If you wish to bring on labour at once & quickly for must pass up a body between the membranes & walls of uterus. A catheter is often used for this. But as it is hard to direct a gum elastic catheter best to first pass a sound. But it is risky to use a catheter on account of being hollow & admitting air to uterus as well as risk of septic matter, hence it is best to use a solid gum elastic bougie. Leave it in till it is expelled by the pains of labour. Labour is quickly brought on by this means within about nine hours or so.

Best methods then are the two of Hamilton. Viz: If you have a week or so to come & go on, use gradual dilation might & morning with the finger using a vaginal douches to relax the parts; if you wish labour at once & have little time to spare use the method of introducing the gum elastic bougie. These two methods are the most certain safest & best.

Other means have been used such as Faradaism the Incunna, Electricity &c but are useless

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6. Promote Labour by supporting &c & using dilatation if required
7. In special cases turn or use forceps
8. Have a bath & means of resuscitating child at hand.
9. Previously secure the services of a well nurse

Class of Preternatural Labours

Definition - Any part except the head presenting
Proportional frequency
Two great orders & subdivisions
I Breech or lower extremity
II Trunk or upper extremity
Proportionate frequency of each
Pathological causes
(A). On part of Child
(B). On part of Mother

Diagnosis of Preternatural Presentations

I During Pregnancy
a. Sensations of Mothers
b. Shape of Uterus
c. Palpation of Fetus
d. Auscultation

II During early labour
a. Os & Cervix high in the pelvis
b. Os dilatable but does so slowly & imperfectly
c. Membranes bag conical & elongated
d. Presentation not easily felt

III After Os is fully opened
Head Presentation
Pelvic Presentations
Presentation of Breech 1 in 4
" of feet 1 in 4 ½
" of Funis 1 in 3 2 8 9

Comparative degree of difficulty to Mother - Child
more unfavourable Head
Greater danger to Child
Infantile mortality (Dubois)
1 in 51 out of 9 8 3 } Head presentations
1 in 11 out of 2 3 8 } Pelvic presentations

Diagnosis { External Manipulation
Auscultation & Internal examination

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Rules & Cautions for Normal Labour

1. At the time of its necessity, by measuring head of child & the type of pelvis by using pelvimeter & fingers. If the result of any previous labours. Always consult with another practitioner.

2 Must to calculate period of pregnancy rightly
3 Prepare the patient & her parts by frequent
relaxing medicated pessaries warm douches &c
4. Watch patient all through. Be prepared to expect
delay in various stages. Pains are apt not to be
so strong & regular. Presentation is apt to be awkward
hence be ready to turn &c
5. Start labour by passing intra uterine bougie &
leave it till it starts labour which it does by
acting as a foreign body. As if labour wanted
quickly. If plenty of time produce labour by
gradual introduction of fingers through os internum.
Labour being once started it is best & quickest
advanced by use of india rubber bag. Introduce
the bag into cervix then first having lubricated
it, then gradually fill it with water having
withdrawn the bougie. Be not to burst the
bag. Leave bag in cervix & the upper part of it
in the uterus. Then introduce a larger bag till
you get full dilatation. These bags are invaluable
in cases of hemorrhage.
6. Support os during dilatation
7. May require to turn or use forceps in some cases
8. Have ready a warm bath &c for the resuscitation
of the child

Q. Also provide before hand a wet nurse for the child for it is born about 6 weeks before its time & mother is not fit to nurse her child immediately after a premature birth

Preternatural Labours

Those in which the head does not present

Two divisions - 1 Breech or lower extremity
2 Trunk or upper extremity

Breech 1 in about 33

Transverse 1 in about 230

Great difference between these two groups

Pathological Causes - Have been considered previously

in part of Child - Hydrocephalus. Death of Child
Twins. Preg. Anmii &c.

in part of Mother - Tumours, contractions of pelvic brim, obliquity of pelvis, falls, attachment of placenta

Diagnosis of Preternatural Labours -

a. Known Presentations of another

b. Shape of Uterus more rounded & elongated from side to side

c Palpation of foetus gives head in a different lie to natural

d Auscultation of foetal heart indicates how it lies

II During early labour -

(a) Os & cervix are high up & round head not being there to push them down.

(b) Os & os may be dilatable easily & yet still not much dilatation going on for child does not fit so nicely into lower segment to dilate it.

(c). Membranes may hang down in an elongated & conical shape.

(d) Cannot easily feel the part presenting for it does not come down into pelvis easily.

III Is fully dilated

Three kinds of Pelvic Presentations

1. Presentation of Breech 1 in 15
2. " of Foot 1 in 74 - in these feet come first Footling
3. " of Knees 1 in 3249 - Very Rare

Breech presentations are so common as to be included among natural labours by some authors

Agrippa, Celsus, Richard 3rd, & Louis 15th. were all footling cases & these cases were regarded as a sort of doomed by the Ancients as King says.

Breech cases are slightly more dangerous than natural cases for they are slightly longer & sometimes have to rescue the child from its danger & it is sometimes dead & in this degree it is more danger

ous to mother

Breech is more dangerous to child. Why? Once suppose child was born asphyxiated from blood being squeezed from below upwards into its head. But this is not so, for it is squeezed from above downwards. When it was said to be from risk of compression of head was debated some time, but this risk is very slight for it is often prolapsed before any part of child. But if trunk be expelled & liquor amnii is drained away, the uterus gets contracted & closing down on head of child & hence the placenta is getting compressed & child thus suffocated & it makes efforts at respiration & draws liq. amnii, meconium &c into its lungs & hence if head be expelled it makes a gasp or two & then dies.

Diagnosis - We can externally feel the head up at the fundus. We can fetal sound is heard about Umbilicus. Internally - After rupture of membranes we can feel the part (Breech) presenting & generally some Meconium is squeezed out into vagina & fingers will also be stained with it. This may occur if child be dead though not a breech, the liq. Amnii being stained

The presenting part is soft

* 6/r

Diagnosis by Internal Examination

A. Breech	B. Feet
a. Evacuation of Meconium	a. Points of toes on knee
b. Negative characters	b. Projection of heel
c Softness	c. Knees
d Cleft between Nates	d 1. Negative characters
e Sacrum & Coccyx	2. Double tuberosities
f Feeling up. feet & thighs	

General Mechanism of Pelvic Labours

Two standard positions

I Dorso anterior 1/2 1 } Oblique
II Dorso posterior 1/2 0 }

Transit of child through pelvis in first Position

1 Movement of Descent
2 Movement of Rotation
3 Expulsion of Breech
4. Movement of Restitution
5 Birth of Shoulders
6 Birth of Childs

Effect of extractive interference on Mechanism

1. Diminution of true expulsive power
2. Forcible dilatation of Passages
3. Displacement of arms upwards
4. Malposition of head

* 6/r

If all breech soft & the cleft more between the thighs than the nates & not at the top of the sacrum. Thighs have a swelling of part & thus the formation of the part presenting may be lost. Bones may be so swollen as to become gangrenous.

If feel for crest of Ilium, tops of sacrum & coccyx & cleft between thighs

If sitting - toes differ from fingers by being all in a line. Distinct projection of heel.

If feel double tuberosities of ischia, thighs & then tuberosities & their tuberosities

Lecture 62 If Oct. 26th/78

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General Rules of Management

1 In none attempt to ameliorate presentation
2 Preserve membranes as long as possible
3 If necessary promote dilatation by douche unguents &c
4 Allow uterine efforts to expel lower extremities & nates
5 When child protrudes as far as umbilicus pull down a small loop of the cord

Different Modes of further treatment

1 If cord pulsating wait before of interfering till the child is expelled as far as the arm pits - May feel the hands - Danger of interfering in relation to the

mechanism of head.

7. If pulsation of cord feeble or absent if child
   hasten delivery by traction, but always have
   uterine tumour compressed through abdominal walls
8. Envelope the protruded part in a warm cloth
   more particularly before using any traction.
9. If the arms have slipped up by the sides of head
   bring the down, disengaging the one which is
   least difficult first
10 In relieving arms pass up one finger as far as
   hand of elbow of infant. Be sure to bring the
   elbow over the face & anterior part of chest
11 Rectify the position & presentation of the head so as
   to allow it to pass the brim.
12. In passing the head through the outlet always
   bring the chin & nose by one side of coccyx &
   keep the head with chin depressed on the breast

Lingering or Difficult Breech Cases

Causes - Treatment similar to that in head cases.

Special Rules for Tedious or Complicated Breech Cases

1 If breech has not entered the brim bring down one
   or both feet
2. If breech is already in the pelvis & has stuck there
   (a) Assist with fingers
   (b) By Forceps

(c) Head locks (danger)
(d) Forceps

Rapid inspection of head at Brim or Outlet
1. Endeavour to rectify positions & relations by depressions - rotations
2. Allow accession of air to the mouth
3. Use the forceps
4. If child dead may perform Craniotomy or Cephalotripsy

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In Breech Cases - Sacrum may be Anterior or Posterior
We name them according to lie of sacrum & commonest is left sacro-anterior & then the right sacro posterior. But also may get right sacro-ant. or left sacro-post.
Take a case with breech in left sacro ant. position. Child lies obliquely in left oblique the bis iliac diameter is part in oblique diameter & this is longest but the thighs are flexed ups in front so that this is then the narrowest diameter of the whole child
In examination originally the finger will first touch the left hip because anterior is all of pelvis is shortest. Waters breaks, then feet & legs get pushed further ups & only breech & thighs come down. Then rotation occurs which brings left hip forward under arch of pubis. As a rule the child does not twist on its

whole axis but there is a twist in the trunk only. Then left hip gets locked under the pubis & the right thigh escapes through the outlet & breech is born. The movement of restitution now occurs & undoes the twist of trunk. Descent goes on & trunk gets born with left shoulder under arch of pubis & head is left in commencement of natural face presentation viz: occiput right antr. but head is coming base first. The head rotates & then flexes on sternum & occiput looks under pubis & then face sweeps over perineum & then head is born

Case dorso right postr. - Right hip to right antr. It rotates to front & descends & looks under the pubis, the twist is of whole child in this case. Descent goes on till trunk & shoulders are born. The head then lies with occiput to right, it rotates to front with face in hollow of sacrum. Descent goes on & occiput looks under pubis & face & forehead sweeping over perineum is born. Sometimes rotation occurs backwards so that the face looks towards the pubis & makes case more difficult

Rupture of feet first is nothing in actual practice, but cord incises on rotation. Very. only one foot down.

Can lay hold of leg or legs when protruded through outlet. But its effects are as follows

Effects on Mechanism. (1) The Uterus thus suddenly emptied remains paralyzed & inert & thus retention of placenta. (2) The cervix in Primiparæ is extremely likely to be ruptured (3) The arms of child may be displaced upwards & they should come down folded & crossed on its breast). & lying along sides head of child & thus jam it greatly. (4) May displace position of head as by causing extension instead of the flexion & hence maybe jamming. Here are some cases that do require interference but these are rare.

Rules of Management.

1. Don't try to alter presentation. Some say try & do so if membranes are not ruptured. But danger is that leg. arm may escape while you are doing it & leave you with a transverse presentation
2. Keep the membranes as long as possible
3. Promote dilatation by douche anæsthetic relaxants &c
4. Always wait till pains expel the lower limbs & nates. This often takes long especially in first labours but always wait. Require to watch the patient carefully all through case
5. When child born as far as Umbilicus pull down

a loop of the cord

6. If cord pulsates well don't interfere till the child is expelled as far as umbilicus & especially do not attempt to make traction.

7. If pulsation of cord be feeble or the child makes spasmodic efforts, the child is suffocating & by making attempts at respiration is filling its lungs with secretion & hence working against any after birth resuscitation. In these cases hasten delivery by traction, but always compress the uterine walls through the abdomen so as to make up as far as possible for the sudden evacuation of uterus.

8. Wipe a warm cloth to feet of child born, for it tends to keep it from making respiratory efforts & it is then easier to hold.

9. If arms have slipped up by the sides of head - In these cases the legs are generally extended instead of flexed & has the feet in front of the thorax. In these cases bring down the arm that is nearest feet.

10. In delivering the arms pass the fingers up to the bend of the elbow for there you would fracture the arm. But there is danger also of dislocation if arms be not brought down properly. This has to be done by bringing it down (the elbow) over the

face & anterior part of child. This is facilitated by bending the child first back towards sacrum which gives more room to get at the arm in front then bend child's body forwards towards pubes & thus gain space behind to as to get better at the other arm.

11 Rectify the position & presentation so as to let it pass the brim if nature herself be incapable of effecting this

12. In the descent of head through outlet keep the nose & chin to one side of the coccyx so as to keep them from great compression & keep the head in state of flexion with chin depressed on the sternum

Lecture 63 Feby. 24th/78

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Order II Preternatural Labours

Cross Births - Presentation of trunks
Presentation of shoulders

Definition - Trunks or upper extremities engaging in brim

Relative frequency 1 in 230 labours

Diagnosis of shoulder presentations

Mechanism - Two Types

Head to the left { Cephalo-sinister
in right side of Mother { Cephalo-dexter

I Head to the left side of Mother
Dorso anterior - right side presenting (commonest)
Dorso posterior - left side presenting

II Head to right side of Mother
Dorso anterior - left side presenting
Dorso posterior right side presenting

Natural termination of this (II) order

1 Death of the mother from Rupture or Exhaustion
(In large proportion of cases nature unable to bring it to a favourable termination

2 Spontaneous delivery
(more favourable to Mother at last)

Two Methods of Spontaneous Delivery

a. Spontaneous version above brim =
Spontaneous evolution of Fœtus
Two varieties
a. Pelvic
b. Cephalic

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Surgery of Difficult Breech Cases

Caused by the various causes which might also delay the head were it presenting & not the breech as large size &c - & the treatment is also similar

In that of head cases

Treatment – Some advise use of forceps, but they are apt to slip & be troublesome. Best to turn & if you can lay hold of one foot & bring it down, then you have complete command of the case. If you cannot do this try & get your fingers round the thigh or one finger at each side thus clasping it & then you can make traction. If you cannot do this you may try the cephal wire fillet, or the blunt hooks, but this is apt to dislocate or break the thigh. If you cannot turn best is to get a hold on the thigh if possible.

The Rules are as follow

1 Endeavour to rectify the position & relations by depressing the chin &c by pressure on malar bones. flexion & then cause rotation

2 Allow admittance of air to child's mouth if it attempt to breathe in birth of its body, as by drawing back perineum &c

3 If head be detained you may have to asphyxiate the foetus & so at last perform Craniotomy or Cephalotripsy.

Order II Of Preternatural Labours

Cross Births – Trunk or shoulder presenting.

Average about 1 in 130.

Diagnosis of shoulder - In vertex the head has no depression as between nates no openings &c as in face. You touch the acromion & as you pass back you feel ridge of acromion, run forwards & you feel clavicle, run finger down you feel humeral bone & may also feel ribs

Diagnosis of thrust - Difficult if touch elbow, but pass finger along till you feel the hand & then feel palm, no heel & fingers are of unequal lengths & end not in a line If you want to know which arm it is - Take it as if you were going to shake hands will it & if it fits yours as it should you know it is the right & it is an ill left.

Breast - By sternum & ribs

Abdomen - Very rare. Feel umbilical cord with

Positions of shoulder presentations - Found just as in cranial presentations. Commonest positions is with the head to the left cephalo iliac & the back to the front. It may lie in the converse position, head in right iliac & back looking to sacrum.

These positions are spoken of by some as Dorso Ant & Dorso Post. I think this is not satisfactory for

backs may assume different positions & still be described under this nomenclature for Dors Ant. might have head to right or to left Flexion & so many the dorso Post. have head to right or to left. The four positions

I Head to left side

Dors Anterior - right side presenting

Dors Posterior - left side presenting

The back being to front the foetal heart is easily to be heard through parietes

II Head to right side

Dors Anterior - left side presenting

Dors Posterior - right side presenting

Natural Terminations of this (II) Order

I. Membranes rupture early & liq. amnii escapes completely & uterus spreads itself over surface of child collapsed. Child presents in a wedge like form which cannot pass. The uterus retracts itself & mother dies from retraction. Or Uterus may expell the child into Cervical Canal & ruptures it. The child always dies & gen. the mother also.

Or the Uterus withdraws itself sub & remains inert may be for weeks & getting recovered again it extrudes a dead child

2. Spontaneous delivery of Child

Many cases for most cases are turned by the practitioner. But it may take place in 2 ways viz:

A. By version of child above Brim. While yet the child was in uterus after rupture of membranes. It may occur in two ways.

(Denman) a. Pelvic - head going up to fundus
b. Cephalic - head going down to Os

B. By Version below the Brim

*by

B. Spontaneous Version below Brim = Spontaneous expulsion of Douglas
Secured in 3 cases out of 6
Two Varieties
a. Pelvic b Cephalic

a. Pelvic - Shoulder descended into Pelvis & fixed at Brim.
Manner of its accomplishment
1st Class - Dorso Anterior - Head to the left
1. Child flexed laterally, when head & pelvis have been compressed as much as possible
2. Descent of shoulder into Pelvis
3. Rotation of shoulder under arch of pubis
4. Disengaging of Trunk
5. Head descends into left oblique diameter

Corresponding mode of delivery in Dorso Anterior -
Head to right
Dorso Posterior - head to left or right
Moulding of Fetus - Rotations &c as in Dorso Anterior.

b. Cephalic

Remedial Measures

Established rules - improve & rectify positions. Exception to these rare - Rectified by operation of Turning.

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Vb. By Version below Brim - Spontaneous or - Evolution of Douglas (who denied Braxton Versions above Brim though it does occur) It occurs after rupture, Pelvis must be wrong & child must be very small. Occurs in two ways

a. Pelvic - Shoulder descended into Pelvis & fixed at brim.

1st Class. Dorso Ant. - Child is crushed together. Here stage of descent the shoulder gets to brim in region of symphysis pubis & then child rotates so that head comes to lie over symphysis. Pubis & shoulder protrudes under arch & then by Evolution = unfolding of child occurs & child gets born as in a Breech presentation the right hip first & head last

2nd Class - Dorso Post. - Occurs in a somewhat similar manner only the position are

changed all throughout

B. Cephalic Version - In very Rare

Head is drawn into pelvis along with the trunk. Shoulder is born first then the shoulder then trunk & head & pelvis breech & last legs.

In all these cases must be a good large roomy pelvis & only a small child or the Version cannot take place. Easier if the child is living for it moulds & crushes together better But it is gen[erally] born dead or dying & hence be ready to resuscitate it.

Lecture 64 Feb[ruary] 28th/98

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Different kinds of Version

I Cephalic

Condition & cases requiring it - Membranes entire or more rarely ruptured

Methods

1st By position of patient

Head over left thumb Mons[?] face on her left side so that weight of genders may turn the head towards the right side & vice versa

Retain by bandages & compresses.

2nd By external manipulation
3rd By internal manipulation
a Pulling down head
b Pushing up shoulder
4th Combined external & internal manipulation
Bipolar version - May assist by forceps if haste required
II Pelvic Version
A. Breech rarely
B. Podalic
a Both feet
b One foot only
c One or both knees
Frequency of Turning in Obstetric Practice
Degree of Danger - Sources of Danger
Prognosis - Period of Turning in shoulder cases
Methods of Turning
1. Version by posturing of patient
2. By External Manipulation
3. By Internal Manipulation
Preliminary Measures - Empty Bladder & Rectum
Position - Uterus fixed
Ascertain the position of the child accurately
Choice of Hand - Anoint hand & arm
Three Stages - 1. Introduction of hand
2. Changing position of child
3. Extraction of Child

Rules for Podalic Version

I Introduction of Hand

1. Pass in through Valve as a flattened cone, if pains present during a pain
2. Direct it towards os axes of Outlet, Cavity, & Brim
3. If Os still small introduce the fingers gradually
4. Rupture the membranes at or near the Os Uteri
5. Advance the hand along anterior surface of Child
6. If force be required press on Child, not on Uterus
7. Lay hand flat on Child during a Pain.

II Changing the Position of Child

1. Seize one or both feet or knees between fingers
2. Applying one hand outside to fix Uterus bring feet down.
3. Bring part seized down over front of Child. Act only at intervals

Should we push up the presenting part? * 68

Transverse Presentations very deadly to Mother.
Established rule is to rectify position by Version.
Kinds of Version

1. Cephalic - Earliest form. Bring the head down to Os. This was only mode used till this century. Here must still be a considerable amount of Liq. Amnii present. Best if membranes whole. Try to do it by Methods - 1. By Postponing of Podalic. By placing hand on left side so that head may go to the right side

the fundus going to the left. Then the head goes down to the brim. If accomplished fix head by a bandage or by supplying membranes (2) By external manipulation — pushing fundus to one side or other &c.
(3) By Internal manipulation - By breaking membranes & pushing hand into uterus & seizing head & bringing it down. But this method is attended with all dangers of Podalic Version (4) Combined Internal & External manipulation or Bipolar - will be spoken of after. Is not admissible only in the Oblique positions

II Pelvic Version

A Breech - Rare. It has been done. No advantage in fact often a drawback. Better if Podalic.

B. Podalic - Gives speediest & safest means of child out of 2nd Cost, due not so much to operations as from conditions demanding it. One death in 15 cases of Mothers. Sources of danger to Mother - Septic air & matter being introduced, laceration of uterus &c.

Prognosis. If membranes unbroken for it is the easier & safer. Some doctors have been known to always use Podalic Version every labour using other forms just as some always use forceps, successfully.

Period to Turn - When Cervix is dilated enough to easily admit the hand. Longer you delay &

more complete the escape of liq. Amnii the more the danger.
Methods of Turning - Podalic may be brought about just as given in Cephalic Version. viz. Internal & External Manipulation (combined) Internal & External Manipulation which is best, the patient being placed on her back unless you give an anaesthetic when let her lie on left side & across the bed with a pillow under hips to let limbs fall backwards. Bladder & rectum must be emptied. Make careful examination first & make out lie of child perfectly. Some use one hand others the other. As a rule best to use the left hand for it is rather less than right & most often the feet are brought to right side But choose hand according to position of child. Fix the uterus by other hand externally. Anoint the hand & arm well with some antiseptic unguent.
Three Stages in Turning - (1). Introduction of hand (2). Changing of position of Child (3) & extraction of Child
Rules for Podalic Version. I. Introducing hand
1. Pass in hand in a cone shaped & flowing a form of Hare be any as you can judge the strength of pains flowing uterus & insinuate your hand.
2 & 3. Direct hand towards os uteri (cavity & fundus. Introduce the fingers gradually
4. Rupture the membranes at or near the os Uteri

the hand & arm if passed rapidly they act as an efferent plug to keep in the liq. amnii

5. Advance hand along anterior aspect of child, finding out its left foot

6 If water escaped & difficulty in passing hand press on the child & not on the Uterus.

7. If your hand in Uterus during a pain lay it flat along the surface of the child so as not to form a projection on which uterus might be ruptured. Also it assists in keeping the hand from getting benumbed by action of Uterus.

II Changing Position of Child

1. Forge either one or both feet, or if you cannot, forge hold of a knee either of them will be sufficient. Hook fingers into popliteal space. Some want to get hold of both & this is better if rupture of womb or want very quick delivery, but it is best to only bring down on leg.

2. Apply hand outside uterus & press down on fundus

3. Make traction with feet downwards with a slight

4 sway motion. Always bring part as leg down over front of child

5. Act only during the intervals. Stop acting if a pain comes on, & then before the next pain comes you should be prepared to make traction.

Some push up the presenting part to admit of easier introduction of hand. But it is unnecessary & dangerous, for it allows greater escape of liquor amnii, & than presenting part is stuffed on turning.

Some use slings to assist, which they pass round the child but they are only trouble. Nothing being required in turning but the hand.

Lecture 65 4th arch 1878

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Version by Combined External & Internal Manipulation

1. Pass two fingers of one hand through Os Uteri so as to feel the presenting part & place the other hand on fundus uteri
2. With fingers in Os gradually push the presenting part to one side while other extremity of fetus is pushed in an opposite direction by the hand on the fundus.
3. Apply the pressure on both the poles of the Fetus during the intervals between the pains & during the uterine contractions endeavour simply to keep it in its new position.
4. Push & lift the Fetus over in such a direction that the body is flexed & the pedalic extremity is bent towards the face
5. Continuing the turning as part after part comes to the Os Uteri until the knees are within reach of the fingers, the trunk being at the same time pushed down by the hand externally

6. If membranes still unruptured, rupture them now.
7. Shift the external hand from the Fundus & apply it to the lower segment of Uterus, so as to push the foetal head upwards
8. Forge one knee between the fingers or hooks it down with one & draw it through the Os Uteri
9. Then conduct as in a case of Turning by Internal Manipulation.

III Extraction of Child

1. Ease case to nature if breech has entered the Pelvis
2. Conduct the case as a footling one
3. If necessary hasten delivery, taking care to keep the contracting uterus in contact with the child's head.
4. Effect extraction of head from Pelvis
   a. With hands
   b. With Forceps
5. By endeavour to save child by admitting air into Uterus.

If Turning be Impossible

1. Evacuate the Thorax & Abdomen & imitate respiration spontaneously
2. Decapitate Infant
   a. Blunt Hook b. Sharp Hook
   c. Scissors c. Cord d. Scissors

Three Stages: - 1 Decapitation
2 Delivery of Trunk
3 Delivery of Heads.

3. Dwarfs Pelvis - Spondylolisthesis

Complex Preternatural Presentations

Those in which foot + hand or arm presenting - Reduce them all to Footling cases.

Indications for Operation of Version

1. Shoulder Presentations
2. Some face cases
3. Inertia of Uterus when head not easily grasped by Forceps - Pendulous Belly
4. When speedy delivery required from

(a) Complications on part of Mother as - Hemorrhage Convulsions Inertia of Uterus Death.

(b) On part of Child - Prolapse of Cord, sometimes premature labours.

5 Contractions of maternal canals from rigidity of soft parts tumours or Pelvic contractions

* bq

Different Version in Combined Internal & External Manipulations

Rules :- See previous Table

1. Pass two fingers through os & feel part presenting pressing down out of way. Push part presenting to one side & other extremity of foetus to other side by hand on fundus Use pressure on both Poles of Uterus only during pains.

uals of pains & only keeps child in position during pains.
When the child till its knees are in reach of fingers
then rupture the membranes. With the head up to
the fundus by the external hand. The two fingers in
one knee & make traction downwards. Then conduct
case as by an Internal Manipulations.
This method is better than introduction of hand & arm
into Uterus & even if membranes be ruptured, &
even if it fails you can try the External Manipulations

III Extraction of Child: - (See Rules in Table)

1 Leave it to nature if breech has got in pelvis
2 Conduct case as if a footling case.
3 Hasten delivery rapidly if necessary being careful to
keep contracting uterus in contact with child's head.
4. Then effect extraction of head by hands or touching
with forceps
5. In any way to save child by admitting air into the
Uterus by means of a flat tube so as to allow
the child to breathe, but it is far better to extract
the child as quickly as possible

If Turning be impossible

It may be from many causes as excessive Retanic con-
traction of uterus which benumbs the hand &
In these cases

(1) To evacuate the Uterus & Abdomen as by Perforation

Smellie's scissors to & then imitate spontaneous expulsion.
But this is an operation requiring great skill & then
it is not like the breech which lurches but
it is the spine & therefore cut it in two parts by
(2) Decapitating the fœtus - this may be done by
passing a blunt hook round the neck &
twisting it round & round. In Britain Ramsbotham's
sharp hook is most frequently used. Dr. Barnes uses
the claws or wire scissors but it is difficult to apply.
Some use whipe cord by passing it round the neck
& drawing the head off. Some have tried to cut
off the head from below as by scissors.
Three stages - (1) Decapitation as above described
(2) Delivery of trunk - Bring it down
by the presenting arm.
3 Delivery of Head - Sometimes the feet
expel it but generally have to extract it with hook
or better the cephalotribe which also crushes it less
(3) Inside Spinal Column - Spondylotomy - Proposed
by Sir James Simpson when
the neck cannot be reached. There a special set of
scissors for performing the operation which divide
spinal cord bya clip. Then trunk is left low &
more manageable & may be expelled naturally or
extracted by craniotomy

Complete Breech and Presentations

That is presentation of hands feet be all together. Make them all into Rolling cases.

Indications for Version

1. In all the sudden presentations at once Turn
2. In those face cases which cannot be rectified
3. In cases of Uterine Pendulous Belly &c When you cannot use the forceps
4. May be from complications: on mothers part - as the enormous Convulsions Uterine Hemorrhage Death May be on part of Child - as Prolapsus of Cord, or in some Premature Labours
5. In Contractions of Pelvis from rigidity of soft parts Tumours or Pelvic contractions. In these cases you cant turn & bring away the child in less room than you could use forceps But must generally use forceps. If Antero posterior direction the forceps would have to be applied in long direction of head & flexion or reversing not acting will makes it better to use version. This is in the flattened Pelvis. Also this direction of compression from forceps would be dangerous to child from crushing base of skull If turned the narrowest part of head will come down first & the narrow part of head in narrow

part of pelvis & it gets squeezed in this direction narrowest whereas if forceps be used it would just be distended & squeezed in the middle, the very part wheel you want narrowest

In many of these cases you would have to destroy the child were it not for V version. Sometimes head gets fractured by V compulsory of Lacerum in these cases. Prefer Version to Forceps when pelvis is contracted from 3½ to 2¾ in. in Cond. Vert. diameter.

Dont use V version unless Cervix very dilatable.

Dont use V version if Vag. Annii escaped any length of time. or if head be impacted in brim. or if mother in bad weak a state. Better destroy the child & wait till exhausted uterus gets restored.

Lecture 66 March 3rd 1848

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Still Births

Apnoea & Asphyxia

Causes - 1 Congenital debility
2 Obstructions of Placental Circulation
3 Compression of the head during birth
4 Obstructions to Respiration

Symptoms - In Debility

Limbs relaxed, jaws depressed, convulsive struggles

lips flaccid, Skin pale cold & sallow. Pulsations slow & feeble. Effort to breathe or cry but falls into a state of apparent death.

:- In Cerebral Congestion

Skin hot, face flushed, purple & bloated, lips blue limbs - full firm & flexible, pulse strong & hard

Treatment

Clear the throat. Stimulate the surface by cold air water &c Application of Marshall Hall's Method & Sylvester's Method Alternate elevation & depression of the head If convulsions warm baths & cold to head Emplasms Purgatives Artificial Respiration Catheter Danger of over expansion & Emphysema Imperfect expansion.

Rules for the Management of Still Born Children

1. Allow free access of air to lungs & apply excitants to cutaneous surface
2. Clear mouth & air passages of mucous &c
3. If face injected & pulse strong divide the umbilical cord
4. If face pale & pulse feeble, save as much blood to infant as possible
5. After dividing cord keep up cutaneous heat & circulation & use means to excite respiratory movements Hot (95° to 102°) & cold (50° to 60°) baths &c

6 If these means fail try some of the ready methods of artificial respiration - Marshall Hall's, Sylvester's Hydrodalds, Schultzes.

7 If apnea still continue introduce a tube or catheter open at the extremity, through glottis & alternately inflate the lungs through it & empty them by compression.

8 Make these efforts in every case of still births & dont desist cease as long as the fetal heart beats

Effects of Labour on Infants

Hemorrhage within the cranium - Two varieties:-

1 Cerebral Apoplexy 2 Meningeal Apoplexy

a. Between Dura Mater & cranium

b. Into cavity of Arachnoid

c. Beneath Arachnoid. Meningeal most common.

Symptoms - Like those of inflammation. Vomiting Fever convulsions, loss of appetite thirst Evacuations natural Clonic & Tonic convulsions. Loss of sense & Face congested.

Tumours on head of New Born Child

1. Caput Succedaneum

Pathology & Treatment

2. Cephalhematoma or blood tumour external to skull of child - Period of occurrence -

Situation - Pathological Anatomy
Causes - Diagnosis - Central depression
Treatment - Active & Passive
1 Cause local treatment to be adopted
2 If inflammation & suppuration come on poultice & fomentns
3 If cerebral symptoms, viz:
Fracture & Depression of Cranium
Injuries & Fracture of Limbs

Period of decadence - Eczema - Ulcerations
Granulations - Growths - Hemorrhage - Late
before separation of Cord - immediately after
upto 8 weeks Causes & Treatment
Affections of Membranes.

Affections of Placenta

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Still Birth

Appears - often viz called Asphyxia, which it is
not for child's heart beats. When born
child does not cry or try to breathe.
Causes - (See Previous Table)
Symptoms - In Debility (See Table)
In Cerebral Congestion (See Table)
Treatment - See the 8 rules for Management of
Still born children :—
Clean mouth & throat. Hot & cold baths

Injection - If face injected & pulse strong bleed a little by cutting umbilical cord. But if pale & pulse feeble time is much blood to child as possible as by squeezing all blood back up out of funis. If all these fail try artificial respiration one methods of which I shall refer to about the best. In this mode the fingers are passed under armpits of suspended child & it is swung up & back to cause expansion & then back again for inspiration. It also clears throat & allows escape of all mucous &c
If these fail introduce an open tube into trachea & breathe into lungs thro' glottis all and you don't use inflate the lungs & cause pulmonary hemorrhages. This has only to be tried as a last resort

Hemorrhages in Cranium

(1) Cerebral (2) Meningeal - Last is most common in infants (first in adults) also it is from small vessels & the brain is found healthy.

Symptoms - (See Table)

Prognosis - Unfavourable except in very slight cases generally results in death, chronic Meningeal disease, a hemorrhage becomes encysted

Treatment - Little is done. Negatives &c

Tumours of Child's Head

1 Cephal Succedaneum - Already noticed

Cephalhæmatoma - An external thrombus - forge varies from about that of a walls nut. Generally on the Parietal Bones, sometimes on Occipital Bone when it has been taken for Caput Succedaneum. Most commonly on Right Parietal. Most common in boys. It is an extravasation of blood generally between Pericranium & Cranium & sometimes extends into Cranium through some crevice Blood in it at first soft, then hard at & cranium round it ossifies & forms a hard ring round a soft centre. It takes about 14 days to disappear Caused by fracture of Cranium or rupture of blood vessel in Pericranium. It has been mistaken for a perforation of cranium from hard margins & soft fluctuating centre, but can easily recognise it if you bear its occurrence in mind Treatment - None incise, some use leaden compressions by bandages to Put part least to use more for fear of threading inselves into Cranium. Leave Local treatment to nature. Protect it. If it inflame - poultice, & if necessary keep it wet with an aspirator or we may have to incise it if Cerebral symptoms

Fractures & Depressions of Skull

all of perhaps raise depressions by air suction. If

you cannot leave it to nature also the fractures.
It may then get all right
Injury & fracture of Limbs
May occur in many cases as in breech presentations.
Child's bones easily repair & often need no
splints but simply a bandage to keep limb still

Diseases of Umbilicus
Funis generally withers & drops off about 5th or 6th day
& umbilicus quickly heals
Hernia - of Umbilicus sometimes. Sometimes result
from intestine bursting through & causing
Peritonitis. Keep a pad on the umbilicus ring
till it contracts small enough to keep bowel in.
Sometimes umbilicus gets ulcerated, use oxide of zinc
lard &c. If granulations - Ag NO_3. Cu SO_4 &c
Hemorrhage - may be before or immediately on
decadence of cord or not till 3 weeks
after may be. It is a very grave symptom & apt to
lead to a fatal issue. 1 out of 15 die
Causes not clearly made out. Want proper sealing of
vessels. Often connected with some unhealthy condition
of liver which keeps blood very liquid. At once
use the Perchloride or Persulphide of Iron &
first a pad wet with. Some have poured on Plaster

of Paris in Umbilicus If these not enough must apply a ligature round the whole umbilicus. Give the child also drops of Iron internally

Lecture by Mr Archer 6th/78

*11

Hygiene & Pathology of Infancy
Liability to death during Infancy
Hygiene

1 Nourishment of Infant - Lactation - Suckling
Development of mammary secretion during pregnancy -
Changes after Parturition
Average duration of Lactation
Quantity of Milk affected by
1 Health of Nurse
2 Diet & Medicine
3 Moral affections
4 Influence of Generative Functions.

Three Stages of Weaning
1st Period - till milk fever is past
2nd Period - till about 9th month
3rd Period - when teeth begin to appear till weaning
Date of Weaning
Dentition - Teeth arrived in Groups
1st Group - Two lower incisors between 7th & 8th months

2nd group – 4 cm upper incisors
3rd " – 1st & molars & 2 lower lateral incisors
4th " – 1st & 2nd molars four canines
5th " – 4 cm last molars

Method of nursing – Suckling by cl nurses
Points to be looked to in a Wet Nurse by the Physician
General health; tongue, teeth, skin, glands
age, breasts & examine nurses own child

Artificial Nursing

Hygiene continued
II Cleanliness of Infant
III Dress of Infant
IV Sleep of Infant
V Exercise

Infantile Pathology

Conditions which render infant specially liable to be influenced by Morbific Agencies
1 Delicacy of Organisms
2 Rapidity of Growth
3 Great vascular activity
4 Extreme sensitiveness of nervous system
5 Special tendency to develope hereditary diseases

Etiology
Pathetic diseases (4 in number)

viz: (1) Scrofula (2) Tubercle (3) Bacteria & Syphilis

Seats of Diseases in Infants

(1). Brain & Nervous System

a. Functional &c. Convulsions

b. Organic &c. Hydrocephalus

(2). Respiratory System

(3). Circulatory System

(4). Digestive System

(5). Genito-urinary System

(6). Integumentary System

Causes of Death	under 1 yr.	1 yr.	2 yrs.	3 yrs.	4 yrs	Total under 5 yrs
Diseases of Nervous system	23.242	4107	1637	948	599	30.533
of Circulatory System	111	53	37	31	36	266
of Respiratory System	20.728	9.614	3699	1589	922	36.252
of Digestive System	2339	414	217	132	120	12222
of Genito Urinary Sys.	6	4	1	1	—	12
of Urinary System	53	73	54	53	38	217
of Generative Syst.	34	34	42	37	29	181
of Integumentary Sys.	340	71	26	18	10	465

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Affection of Mamma

Mammæ gets largest & enlarged during Pregnancy from formation of milk which may be squeezed out after Parturition Mammæ very liable to inflamate apply poultice belladonna &c. If they suppurate treat them as you would an ordinary abscess

Liability to Death during Infancy

In 1867, 392,000 children were born & 17 P Cent died during 1st year. Of total deaths occurring in Britain in a year 1/3 are deaths of children under 1 year In Belgium 1/2 the children die under 5 years of age Out of 392 000 born in 1867, 65 000 or more than 16 P.C. died in Infancy. In Scotland 11 P C die under 5 yrs. Boys die in proportion of 152 to 126 girls.

Principal Causes of Death in Children under 5 yrs.

Causes of Death	Under one year	Under two years	Under 5 years
Zymotic	26.335	17.388	10567
Constitutional	7.777	4.819	2196
Local	16.858	11.570	5713

Nourishment of Infant

Factors - The quality of colostrum to be passed out of Mammae indicates to a great extent what will be the quantity & quality of milk Flows of Colostrum be plentiful & yellow, the milk will probably be good. If breasts are large & full as may be the case, but nipples small & may be retracted use the breast pump to draw them out before Confinement.

The child being born on a position to stand place to Nurse for a few hours or even a day or two, for

in primipara full secretion of milk does not occur
till third day, though in multipara may be
plenty of milk in first 8 to 24 hours
Average duration of lactation - some women lengthen
it for economical reasons, some for child's benefit
others to prevent conception occurring
Quantity of Milk affected by
1 Health of child as Syphilitic herpes &c
2 Diet as onions garlick &c Medicines as
Asafoetida, Mercury
3 Moral Affections as Fear - Irritation - Passion
4 Influence of generative functions - as menstruation
coming on at times causes child illness, marked &
if of pregnancy occurs either child suffers, or
fetus, or Mother, or all if lactation continue
but the child should be weaned at once.
Three stages of Nursing - After parturition the
mother should be allowed a sleep before child
being put to the breast. Fennel seeds or horn-
mopshage, applied to breast at once is said to cause
contraction at once. First apply child to breast
several times when there is still no milk, for it
being deceived will refuse the breast after. Feed
it with cows milk like milk comes into mothers
breast. Child may not be able to suckle

from having here lips or tongue tied. Rectify.
If not (mothers) milk will purge the child.
Child should have breast regularly every 3 hours &
from the two breasts alternately. Train child
to take breasts at regular intervals gradually
lengthening the intervals at night. Child's
symptoms of wanting milk are easily learned.
About 8th month start letting it have mixed food
as by chicken broth corn flour &c so that it
may be independant of mothers milk at 12 months.

Dentition

1st group - Two lower incisors between 7th & 8th months
Six weeks elapse about & then come
2nd group - Four upper incisors between 10th & 12th months
Between 12 & 15th months come the
3rd group - 4 molars & 2 lower incisors
4th group - The most painful & troublesome are the
4 canines coming between 18th & 22nd months
Weaning often requires suckling till canines
appear but no longer
5th Group - 4 in last Molars.

Weaning - Suckling by nurses
When mothers milk is too early or too poor
alone. Give cows milk & chicken's food.
If mothers milk fail altogether get a wet nurse

Suckling by Nurses

In getting one look to the woman's character & general surroundings, how she manages her own children. See to her general health as to digestion &c. Look at her skin as for eruptions or old scars for fear of Scrofula or Syphilis hence look if any hard glands sore throat &c & also look at her child for it might exhibit signs of syphilis when mother did not. Best age is between 21 & 31 years. See that her breasts are well developed & her milk plentiful & good. Also her child must be about the same age as the child she is to nurse. See whether her milk has served to nourish her own child

If you cannot get a Wet Nurse then you must feed them artificially from milk of animals Best milk after mothers is that of the she ass, next is mares milk being most like mothers but being hard to get you must fall back on the milk of the Cow or the Goat

Dilute the Cows Milk with about ⅓ of water gradually lessening the quantity of water. Must also sweeten. Some can take it so, but casein being hard to digest others cannot, therefore let

milk stand a while in a vessel so that cream may fall to the bottom, draw off the milk for child. Give it by means of nursing bottles which can be perfectly & scrupulously cleaned

Comparisons of Woman's Milk & Various Animal Milks

Specific Gravity	1000 parts contain Water	Solid	Sugar	Butter	Casein	Salts
Woman	1032.67	889.08	110.92	43.64	26.66	39.24	1.35
Cow	1033.38	864.06	135.94	38.03	36.12	55.15	6.64
Ass	1034.57	890.12	109.88	50.64	18.53	35.65	5.24
Goat	1033.53	844.90	155.10	36.91	56.87	55.14	6.18
Ewe	1040.98	832.32	167.68	39.43	54.31	69.75	7.16

We use the milk wde sealded & perfectly fresh.
Some prefer Swiss Condensed Milk diluted with water
It is always of an unvarying strength

Lecture 68 March 7th 1878

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Symptoms & Diagnosis of Disease in Infants
Difficulties in Diagnosis
Information to be gained from attendant
Observations to be gained at same time

I. Indications furnished by countenance
1 Whole face altered
2 Change in expression of upper part of face
3 Change in middle of face
4 Change in cheeks & lips

II Cry
III Gestures & Attitude
IV Skin
V Temperature
VI State of Mouths
VII Respirations
VIII Pulse
IX Size of various organs of body
X Discharges from stomach bowels & bladder

* 1/2

Best kinds of Infants Foods are such as
Robinsons Patent Barley
Robinsons Patent Groats
Mimeasca
Nicoles Farinaceous Food
Savory & Moores Infant Food
Mr Ridges Patent Food
Chapmans Entire Wheat Flour
Condensed Swiss Milk
Nestlés Milk Food (Last but Best)

At birth of child it must be well washed (to remove grease Caseosa) and warm water with soap & repeat this bath night & morning If any excoriations or irritations of skin apply Violet Powder, Yellow earth, Bismuth. Once be after washing apply a binder of flannel, after wrapping up the Umbilicus. Then apply the usual light loose dress.

At first child should only sleep & suckle. It should be taught to empty the breast & bottle before going to sleep & not be taught to go to sleep with the teté in its mouth or it gets it will not go to sleep without it.

Exercise - In the nursery which must not be over crowded. Dont let child walk before capable of bearing its weight. Let it have plenty of fresh air.

Infantile Pathology

Child just born breathing Kidneys be now called into play & also change in circulation which render it very liable to affections. Its organism very delicate & growing very rapidly. There is great vascular activity the blood passing quickly through the body. Brain still vastly disproportionate to size of body & hence extreme

nervous sensibility.

Child is also specially liable to hereditary diseases. Most of its affections result from wrong feeding clothing, hot or cold, want of cleanliness exercise, fresh air &c & their weak frames are very liable to zymotic diseases.

Diathetic Diseases - In these child is very liable & cause many deaths. It types

1 Scrofula - Hair, cheeks round plump, teeth white & shelly, lips thick, nostrils expanded Abdomen large full & hard. Glands large & thick bends of long bones thick. Bowels torpid &c they tend to inflamations of a low type especy. of Mucous Membranes hence Conjunctivitis, Caries, &c.

2 Tubercular - Dark, skin thin, & transparent. Face bright, sharp conical. Thin lips. Eyes bright, lower jaw angular. Abdomen contracted. Limbs straight. Bones hard. Glands small & cells early. Precocious. Tend to inflamations of serous membranes which form serum rather than pus &c &c.

3 Rachitis - Changes in shape of face, head, limbs. Face broad & square, fontanelles wide & long open. Chest flat & grooved at sides. Limbs bent & bandied. Spine often curved. Skin thick

Teeth early & bad. Bones soft & deformed
Syphilitic - Most frequently congenital. Symp.
appears before 3rd. months. Many show
no trace at birth, skin may be dusky or smoky
voice shrill & cracked. Coryza. Head degestion
Ulcers at mouths & anus Loss of hair. Affections
of Throat &c.
These affections often decide upon Prognosis & Diagnosis
Seats of Diseases in Infants
71000 died of Local disease in 1864 under 5 yrs.
as shown in the Table previously given.
Half the deaths are from respiratory system. Many
from Nervous diseases as Convulsions Congestions
Hydrocephalus. Tubercular diseases &c.
Respiratory diseases are from first. (Mean pulse is
140 to 120 & respiration rate of 1 to 3) Respiration
is feeble & hence very liable to diseases as Bronchitis
Pneumonia Croup Whooping Cough Phthisis Laryngitis &c
A great many die from diseases of Digestive Syst.
& also gives cause to many of the other causes of death.
Depends on improper nutriment, causing Diarrhœa
(At first stools are liquid & only coloured with bile
& frequent, By & bye get more firm & less frequent)
Jaundice (common)
Diseases of Circulatory, Genito-Urinary & Integumentary

system far more rarely cause death.

Symptoms & Diagnosis of Infantile Diseases

Diagnosis difficult from want of power of facial expression & speech & from liability to secondary sympathetic phenomena. When child gets older & can speak of its ailment, it is often very frightened at doctors presence & it is difficult to approach. If infant be quiet & asleep it is easy to examine. If older & resistant, when you go into room don't seem to take much notice of child so as to alarm it, let it get accustomed to your presence, at the same time learning from mother or nurse all about its complaint, teething, family history sort of diet, sex & age of child, state of evacuations, sleep &c. During this time the child is getting more used to you. Observe its expression, limbs, body, respiration, colour of skin &c.

Indications from Countenance — Flushing in fevers yellow in jaundice &c &c In upper part of face speedy in Cerebral Diseases brow shrunk eyes dilated squinting contracted &c. In middle of face in respiratory & circulatory apparatus diseases. In cheeks mouth & lips in digestive diseases. Cheeks pallid or sunken, mouth contracted, lips dry &c &c

II Cry - If healthy & properly nourished wile never cry, if all wants supplied &. If frantic cry rates, if head pain cry is sharp like hydrocephalic cry, if inflammatory disease of lungs cry is rather a groan & cut short for cry pain &. Hoarse whispering or croaking in Larynx Affections. Long moaning cry in Abdominal Affections

III. Postures & Attitude - Great pain especly in abdomen causes contraction & flexion may be bent & drawn up. In convulsions various attitudes hand up to head head rolling from side to side in Meningitis. Putting the hand to throat mouth stomach in affections of those parts

IV Skin - Hot, moist, dry, discoloured, blue, livid, yellow, tawny, syphilitic

V Temperature - 98.6° should be. If it exceeds 105° very dangerous. Seldom survives 110°. Death is preceded by fall of temperature. Take it in axilla

VI State of the mouth - Temperature - Hot, moist, or dry. State of tongue, breath gums, teeth.

Lectured by Mr Archer 11th Oct 1878

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Rules to be observed in treatment of Infantile Diseases

1. Many may be arrested by very simple treatment if promptly applied - Ex. Change in diet
2. Drugs are altogether unnecessary when articles of diet can be used as medicines Ex. In Constipation - fruit water in milk & farinaceous diet instead of Castor Oil.
3. Children are most susceptible of Drugs which act on Nervous System Ex. Opiates & Stimulants
4. Select always the remedies whose composition & modes of action are best known.
5. Of these administer the least irritating & the most palatable - such as Syrups of Phosphates
6. Use hygienic & prophylactic measures to prevent various diseases E.g. Quarantine if contagious.
7. When disease is present ascertain the primary source of irritation & endeavour to remove it.
8. Use sedatives after to allay sympathetic affections.
9. Treat directly secondary sympathetic affections which principally danger from them.
10. In acute inflamations use early antiphlogistic measures such as Baths, Enemata, Fomentations

Vaccants & Sudorifics

11 Restrain excessive secretions or effect their evacuation as in Bronchitis &c

12 Prevent spread of some local inflamations as Erysipelas &c

13 In Dangerous inflamations give Dr. Tabor. Tonics & Stimulants.

14 Combat special deathetic tendancies

15 Endeavour to remove all irritations primary or secondary - Where disease becomes chronic

16 Restore various functions to their proper standards.

17 Regulate diet - Temperature - Exercise - Sea air &c.

Class IV Complex Labours

A - Complications on part of Mother

1 Uterine hemorrhage

Periods at which it may occur :-

(a.) During 1st 6 months - Abortion

(b.) During last 3 months

(c.) During 1st two stages of Labour

(d.) Between birth & delivery of secundines

(e.) After expulsion of Placenta

Hemorrhage in last Months & 1st stages of Labour

A Unavoidable

B. Accidental

A. Unavoidable from Presentation of Placenta.

Synonyms - Placenta Previa

History - Frequency - Causes - Symptoms
Unpreceded by accident - greatest with such pain
Diagnosis - Digital Examination
Stethoscope
Constitutional Effects of Discharge
A. In Moderate hemorrhage
B. In severe hemorrhage
Sources of hemorrhage in Placenta Praevia
Varieties of Placental Presentations :-
Lateral, Meridional, & Cervical Zones
Prognosis - To Mother & Child
Rules of Treatment of Placenta Praevia
1 Palliative - If hemorrhage slight & not in labour
(a) Recumbent Posture (b) Removal of all stimuli - exclude (c) Free ventilation - coolness, few bed clothes (d) Refrigerants - Astringents (e) Allay Pains Opiates (f) Local means - Plug cold styptics (g) Watch or be with in call
2. Radical. *3
VII Pulse - Rate of rapidity varies from 80 to 150 as in Meningeal affections. In Respiratory affections they get as 1 to 2. High according to amount of fever
IX Enlargement of Organs - As liver Spleen Glands &c. Uterus Lymphatics &c

X Discharges from Stomach, Bowels, Bladder – Child may vomit immediately after feeding from repletion. If some time after feeding may be acidity he may get incessant vomiting as in Pyloric Affection Measles Scarlet Fever &c. From Bowels may be slimy faces, brown & green &c as from teething &c. From Bladder just as in adults such as Albuminuria

Before interfering with child make a most perfect physical examination after gaining all the information you can from Mother &c.

Rules to be observed in Treatment of Infantile Diseases

1. Often may be treated by simple diet alone.
2. Drugs gen. not needed. Thus if child constipated dont keep giving Castor Oil but by some change in the diet, or treacle, molasses &c
3 Child very susceptible of Drugs such as Narcotics & Stimulants which affect Nervous System hence must give them in smallest doses
4 Give drugs whose composition & actions are best known. Ex Remedy in fever &c
5. If use those least irritating & most palatable As instead of bitter Tonic give Syrups of Phosphates.

6 Use hygienic & prophylactic measures to prevent various diseases &c. Stamp out contagious diseases by instituting Quarantine. Isolate the patient from other children.

7 When disease is present ascertain primary cause of irritation & endeavour to remove it. Thus if convulsions may be teething, worms, or intestinal irritation causing them

8 Use sedatives to allay sympathetic affections. Bromide of Potassium is a most useful sedative.

9 Treat secondary sympathetic affections when chief danger is from them as Diarrhoea &c

10 In acute inflammations use early antiphlogistic remedies. As Baths Lineaments Fomentations Rubefacients Blisters

11. Restrain excessive secretions or effect their evacuation as in Bronchitis &c

12 Prevent the spread of some local inflammations such as Diphtheria Erysipelas &c by Nitric Acid Iron &c

13 In low gangrenous inflammations give Ol. Chloratis Iron & Stimulants

14 Combat special Diathetic tendencies. If flattering of anterior fontanelle give Brandy, in some in milk, in others Jacket Whey

15. Remove Primary or Secondary Irritations. Where

disease is chronic

Rx. Restore a various functions to proper standard
How get stomach right before giving tonics

Rx. Regulate diet. Temperature Exercise
Sea air, &c.
Cinchona Bark best form to give them
Tannic. Cod liver Oil is of the most
value in almost all children diseases.
Recovery in children from diseases is far more
complete than in adults. Learn the forts of
children ailments in special families. Diseases
of children change very rapidly hence dont
be too chary of visiting them often.

Class IV Complex Labors

Complications may be on Part of Mother & Child

A. Complications on Part of Mothers.

1. Uterine hemorrhage - may be from abortion
or miscarriage, but
these we have considered. But may be during
last 3 months of gestation or during any of the
3 stages of Labor, or Post Partem after
Labor is entirely completed

a Unavoidable Removal age - When Presentation of Placenta is Placenta Prævia. In these cases Placenta instead of being planted upon Uterus it is planted over Uterine orifice. Formerly thought that Placenta was planted above & only came down to Os at labour. Or so. Ramsbotham says there is 1 in 175 labours. It is more frequent in Multipara than in Primipara Sir J. Simpson had only 11 Primipara out of 146 cases. More dangerous cases, more prolonged & fatal Causes - Of planting of uterus here. Ovum is generally caught in folds of uterus high up in Primipara, but in Multipara the Uterus is of a rather different form, may be endometritis the folds are done away with & walls of uterus may be apart hence Ovum may fall down low in the Uterus. They may also occur in cases of fibroid tumours lacerating cavity of uterus. Laxity of uterus apt to be more often, more the children they have had. If gets Placenta planted in Barnes Cervical zone. It causes a greater liability to hemorrhage during first months & very liable to cause abortion.

Towards close of Utero Gestation there is a tendency

any to opening of cervical canal even to size of 2s arrow piece. The opening up is very liable to tear off & detach some portion of placenta. But if it escapes then it surely occurs at labour.

The hemorrhage often occurs after exertion of some kind but may come on unpreceded by any accident of any kind.

If in labour a gush of blood occurs with every Uterine contraction from its accumulation during the intervals. Diagnosis:-

The state may be surmised, but can only be diagnosed by actually feeling placenta presenting. Fore surface feels thick & doughy can feel foetus as through a cushion. Structure of Placenta is quite characteristic in these cases may feel the worm like vessels circulating on its surface. Strongly spongy structure Stethoscope may be used to recognise the extra sound of the breast there

Constitutional effects of Discharge:-

A. In moderate hemorrhage - Pale cold, giddiness, failure of vision blind breathing hurried & sighing.

B If severe hemorrhage - May be fainting

pulse is very steady & almost imperceptible rigor vomiting. Dyspnoea. Want air. Ill as be deafness & blindness & may be fatal.

Sources of Hemorrhage - Some supposed from ~~to~~ Torn surface of Uterus.

Though it does sometimes come from there, yet in these cases it is the least that comes from there Most of hemorrhage comes from Utero Placental Vessels at the point of detachment. There is a sinus round Placenta into which ending arteries entry. Worst of it takes place when the whole placenta is detached

Lecture 40 March 12th 1878

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II Radical

If hemorrhage severe or full time arrived

Three measures of treatment

1 Evacuation of Org. Annie

2 Artificial delivery of Child

(a) By Turning (Be Rad)

Time of turning regulated by circumstances

1. Ill regulated by pain
2. Regulated by state of passages
3. Regulated by strength & danger to mother.

Cautions - It regulated by previous amount of flooding
Not to operate too early - no interference
during hand pass by the side of the
placenta not in general through it.
Force the Uterus into full subsequent contractions.

(b). Artificial delivery by Cephalotripsy

(c). With Forceps

3. Separation of Placenta

Safety of separation as compared with Turning.
It has been recommended to tear & crush it &
remove it by bits

Rules for Partial Separation of Placenta

1. Introduce finger or sound through the Uteri separate or strip off placenta all along the line of its detachment from the Uterus.
2. Separate any portion where the placenta can be felt in the Uterus
3. If after having been suppressed, the hemorrhage returns again try to suppress it by separation of an additional part.
4. If partial separation fail, then proceed to complete the separation of the Placenta
5. After each separation delate (see also Barnes Bags) in which total separation may or may not be followed.

As to Child

1. When child dead - i.e only consider Mother
2. When not yet viable - Version greater risks to mother

As to Mother

3 When hemorrhage great & to Uteri not sufficiently dilated for Forceps
4 When pelvic passages to small for safe & easy Forceps
5 When mother too exhausted to bear Forceps.
6 When evacuation of Liquor Amnii fails.
7 When uterus too contracted for Forceps.

Rs. Accidental Hemorrhage

Pathology
Symptoms & Diagnosis
Discharge of blood at intervals of pain
Acute pains in some parts
Distension of the Fundus
Collapse & other symptoms of loss of blood
Causation

* 4/4

The Placenta Praevia have the Placenta attached in the lower part of Uterus, there its position varies may completely cover the Os & called "Placenta Praevia Completa" & in them

very dangerous. But it may only partially cover the os. Uterus not so dangerous called "Partial Placenta Praevia". Or placenta may only have a marginal attachment to the Uterus which is not uncommon & is not very dangerous, called "Marginal Placenta Praevia". If only a portion of placenta lie on cervical zone still an expansion of the hemorrhage will occur.

Prognosis - Important as to insertion of Placenta & very grave for both mother & child. 1 in 3½ of mothers die. Danger may be immediate & due from profuse hemorrhage. If bleeding begin with cervix still undilated patient may sink before dilatation can be got. Also depends on amount of Uterine contraction after, for if none there can be no arrestment of hemorrhage; if plenty they hasten the labour & cause contraction & closing & sealing of vessels. Patient may die rapidly if hemorrhage profuse, cervix undilated & no contraction. More dangerous if complete Plac. Praevia & less according to less degree of completeness. Also must consider danger from sudden delivery & also the means by which it is brought about. Also greater danger during Puerperium as absorption of septic

mother, Phlebitis, Puerperal Fever be it if the pass safely through may remain long ill & weaken.
To Child - More dangerous than to mother. Danger may be in utero die. Danger from Asphyxia from non aeration of blood. More dangerous according to completeness of presentation. Also danger from prolapse of cord. Risks from mode of delivery as forceps &c. Also risk from premature Births.

Rules of Treatment

Can often ward off or greatly diminish risks. In some few cases no special interference required, as of non variable child & passages opening wide &c often when only a Marginal Placenta Previa.

I Preventive Measures - When hemorrhage slight & pregnancy not completed.

She must stay in bed, & to stimuli. Include. Keep cool & not many bed clothes. Ice head helps. Use strong astringents as Gallic Acid not much good as you may understand. Give opiates as Acetate of Lead & Opium Pills. Should you use local means? Depends on case. Might do harm with plugging by distention by setting up uterine action. If must use plug best to pass it right into Cervical Canal as a Bag & thus set up labour at once. Best generally not to plug one use cold for it only

shall patient. Stypsics as Ergot &c may be applied but they are difficult of application. On the whole local means are called to be abstained from in these case. With your patient well & always be within call for separation of placenta may take place at any time

II Radical - When hemorrhage is severe, or full time arrived. 3 lines of treatment (1) Some have so accurated to Rupture Uterus. Dr Simpson experience warns against doing this for loss power of Uterus through st & hinders after measures as Turning &c. It should not be had recourse to only in the simplest cases those in which Placenta Prævia is only partial.

2. Artificial Delivery of Child - effected by.

(a). Version - Not to be had recourse to only under certain conditions. Pains dont always act as a guide for these may be more to contract uterus. Incision of Perineum has to do with it for must not think of turning if not enough dilatation for fear of tearing & laceration which is far more serious in these cases on account of greater vascularity of part. Must consider strength & previous amount of flooding of mother

By Bipolar method takes longer to accomplish, but

use if you dont want to turn immediately, but use the Internal Version if you do.
Dont pass your hand through the Placenta if you can help doing so. Lay hold of both limbs & bring them down together. After extraction of child press Uterus into full contraction as by Ergot &c.

(b) Ecbolics - The Mothers salve may sometimes have to be used but rarely

(c) Forceps - When membranes ruptured & head presenting may sometimes apply them within the Uterus, but must see that the Cervix is fully dilated for fear of rupturing it.

2. Separation of Placenta - This is natures mode & Nagele says this very mode is the most dangerous she could use, but it is by this same mode by which she also stops the hemorrhage. When placenta separates the marginal sinus gets opened up then veins & arteries supplying it get torn across & thus they cease to supply the sinus & get sealed up & hemorrhage is for the time arrested in this part. Just in this same way Art imitates & does by at one stroke of finger detaching the lobule of the placenta.

Best to try this mode of treatment before any other

some Rules recommended even bearing & crushing of placenta & removing it by bits. But this is useless

Rules for Partial Separation of Placenta.

1. Separate strips of Placenta all along the line of its detachment from Uterus with your fingers or your sound.
2. Separate any portion you can feel on the stretch.
3. If hemorrhage return separate a part more
4. If this fail separate the whole placenta from the whole area & then remove it
5. After each separation dilate Cervix with Barnes India Rubber Bags. They form a plug also a wedge to dilate to Cervix & at the same act as a powerful stimulus to cause the Uterus to contract. These bags are most useful in these cases

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* 7/5

Treatment

1 Palliative measures
2 Use of Plug
3 Rupturing of Membranes
4 Artificial Delivery

Rules :-

1 Empty rest, quietude & coolness
2. Rupture the membranes when os undilated passages urgent & hemorrhages persistent & not too profuse
3 If os is dilatation with bag or sponge tent
4 Whenever dilatation sufficient & hemorrhage persistent turn or use forceps
5 When hemorrhage great dilate os by incisions if necessary & deliver by turning.
6 Cause the Uterus to contract strongly after the expulsion is completed.

II Hemorrhage in 3rd Stage of Labour

Dangers - retained placenta from.

1 Inertia of Uterus
2 Irregular contractions of Uterus
3 Placental Hypertrophy
4 Morbid adhesions of Placenta

Consequences of Retention of Placenta

1. Hemorrhage 2 After Pains
3 Continual distension of Uterus & subsequent expulsion hours or days after
4 Decomposition of the blood & other offensive matters.

5. Septicaemia
6. Inflammation of Uterus & Peritoneum
7. Disintegration & gradual disappearance of the Placenta
8. Involution of the Uterus

1. Inertia of the Uterus

Causes - Symptoms
Treatment - Ergot Stimulants Compress Uterus.

2 Irregular or Hour Glass Contraction

Causes Symptoms Diagnosis :-
a. Pains present but Umbilical Cord not distended
b. Cord descends when pulled but springs back again
c. Irregular shape of uterus may be felt externally.
d. The contraction may be felt per vaginam like going through a second os before reaching the encysted placenta

Treatment :-
1. If Membranes be easily dilatable & placenta half out extract immediately
2. If not then dilatable chloroform deeply & dilate by introducing the fingers the one after the other.
3. Push down the Fundus Uteri by the one hand placed externally while using the other

to dilated the Uterine & keep up steady compression with the external hand

3 Hypertrophy of Placenta

Symptoms Diagnosis
Treatment - Easiest form

4 Morbid Adhesions of Placenta

Partial or Complete

Treatment :- 1 Apply strong pressure to uterus externally with one or both hands. & rapid

2. Pass in 1 hand according to the rule and turning & cautiously separate the placenta - if the adhesions are firm and the placenta thus gradually separate it round the margins *4/5

As to Child - When it is dead. Only consider the mother & separate placenta totally as if it is non viable do the same

As to Mother - When hemorrhage great & is not sufficiently dilated for turning. This is said to occur 1 in 3 & about 8 out of 11 die. Or of pelvic passages too small. Or mother too exhausted. Or of convulsion of the Uterus. Version fails Or when uterus has contracted for turning. In all these cases totally separate the placenta.

Same rules wont apply to all cases I must treat them on their merits. Often buy the india rubber bags for dilating the Cervix. But beware of vaccinating Leg. Umii, keep it as long as you can. Turn by Bipolar if you can. In some cases extracted head with forceps and with Cephalotribe if necessary.
Bleeding can only be arrested by emptying the Uterus. After emptying get Uterus to contract well by. Accidental Hemorrhage
Placenta generally attached in Lower Polar Zone. Often occurs from an accident though not always. Symptoms & Diagnosis - Placenta up in Uterus & hemorrhage. If Pains key are most marked during intervals. When Uterus contracts it draws down presenting part & acts as a plug stopping bleeding till Pain goes off but it returns after & while and Placenta Previa the gushes come with the Pains. Pain may be very acute & especially when blood gets confined within placental uterine area & may be coagulate there & form dense hard clots & may be only serum escaping. You can feel distinct irregularity of wall of Uterus. Often fainting. Collapse & anxious - Thrombosis in collapsed. Disease

of Placental May escape in cases of Placenta
or between Placenta & Uterine Walls.
Often from some accident or injury as a crush,
straining, lifting, stumbling, jumping &c
Loss of blood affects patients very differently some dying from little loss in comparison to others.
Treatment — (1) Is alleviate if hemorrhage not intense as an Opiate. (2) Use the plug not the Vaginal but the Cervical for it less painful to patient less liable one to pneumonia & plugs cervix & also dilate it at same time. (3) Rupturing the membranes & then uterus itself compresses the placenta, this is not desirable for it makes Inducing very difficult. (4) Artificial Delivery
Rules :- Rest, Quiet, Coolness
Rupture of sufficient dilatation & not much pressure hemorrhage
Hasten dilatation with Bags. Or use the fingers carefully. Or if necessary notch the margins of Cervix & then dilate.
Extract with forceps as soon as possible.
Use Uterus to contract strongly after.

II Hemorrhages in 3rd stage of Labour

After expulsion of child. Hemorrhage profuse & dangerous & often proves fatal though hopefully not commonly fatal

Dangers - Retained Placenta from

1 Inertia of Uterus
2 Irregular contractions of Uterus
3 Placental Hypertrophy
4 Morbid Adhesions of Placenta

Consequence of Retention of Placental :-

1. Hemorrhage
2. After Pains
3. Continued distension of Uterus & subsequent repeated hours or days after
4. Further distension from decomposition of blood & offensive discharges
5 Septic Inflammation may be thus set up
6 Inflammation of Uterus & Peritoneum may follow
7 Disintegration & gradual disappearance of Placenta. Does not take place. It must come away
8 Subinvolution of Uterus. It is kept permanently distended & enlarged

1. Inertia

Causes - Imperfect action of Uterus in 2nd Stage

often from mismanagement of 1st stage or in 3rd stage from mismanagement of 2nd stage.
Constitutionally may result from too quick child bearing. Generally it seems from a too prolonged 1st stage or from too quick extraction in 2nd stage, as by quick use of forceps
Symptoms - Absence of Pains, which have been all right in previous stages, Lost from sudden expulsion of Contents of Uterus. No recurrence of pains. Abdominal Walls relaxed & ill defined, whereas you should feel firm hard fundus, it remains flabby & flaccid & hemorrhage may be going on internally & not escaping till uterus may be distended to a size as large as in full pregnancy
Treatment - Ergot as quickly as possible.
Compression of Uterus &c. Stimulants.
Good rule to give Ergot (1/2 gr subcutaneous) just before escape of child's head so as to cause after contractions of uterus, also as child is expelled follow the fundus well down into the Pelvis with your hand & thus assist expulsion of the Placenta
2 Irregular or Non Uniform Contraction
often due to irritation of Uterus as from some operation. May occur at different heights in the

Uterus. It consists of contraction of a bundle of the circular muscular fibres.

The patients tells pains

Diagnosis – Pains but no lengthening or coming down of Cord for it is still fast. Cord descends when pulled but springs back again.

The Uterus feels of and irregular shape externally

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1 To extract the Placenta when separated & before removing the hand force the Uterus to contract

2 If impossible to remove the whole placenta remove carefully all that can be got.

III Hemorrhage after Delivery of Child & Placenta

Causes :-

1 Tedious & instrumental labours 2 Plural Births

3 Peculiar conformation or morbid attachments of Placenta

4 Relaxed state of Body (whole muscles weak & imperfect)

5 Peculiarity of Constitution

Time of occurrence

Treatment

1. Force Uterus into full contraction

(a) By external stimulation & abdominal compression.

(b) Internal irritation by introducing the hand.
(c) To compress from within & without
(d) Sudden shocks from Cold or Hot Water.

External & Internal - Means adopted to form in vessels

2. Accept Uterus contracted by hand, binder, compress, Ergot.
3. If it be necessary inject haemostatics into Uterus, or by dipping in a Sponge & introducing it.
4. If these measures fail compress the Aorta
5. Carefully remove all coagula from Vagina Cervix & Uterus.
6. Complete transfusion of blood in extreme cases.

Where to the following Rules

1. The nurse who uterine contracting by hand, pad & if any tendency to relapse by Ergot or Injection
2. Carefully prevent from moving head or making any movements
3. Accept her cool, quiet & perfectly free from all excitement
4. If she be restless & irritable give Opium so as to act as a general Sedative
5. Employ cordials & stimulants if her state of exhaustion required them.
6. Watch her sedulously for hours & ascertain at intervals if there be any re occurrences of the hemorrhage.

Out of 43 cases of Collins of Dublin
23 occured in first half hours
7 occured in second half hours
3 in in third & 2 in fourth half hours.

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Hour Glass Contraction (Continued)

Internally you can feel the contraction

Treatment:—

1. If dilatation extract it if not at all (placenta)
2. If not dilated Chloroform deeply & dilate by gradually forcing your fingers through constriction till you can reach the placenta. If no great hemorrhage you may give only an injection
3. Push down the Fundus by hand externally while dilating with the other hand internally & keep up steady pressure.

3 Hypertrophy of Placenta

Only rare. Can feel the large size of placenta. Stimulate uterus to expel the large mass. Compression externally & Ergot.

4 Morbid Adhesions

Partial or Complete. That is may affect only one or several cotyledons or the whole placenta & in last case there may be no hemorrhage at all, in fact there is generally no hemorrhage for there is no surface of it. Still there may be strong pains but no descent of cord May trace up cord & find placenta offers high up in the Uterus or anywhere. If no hemorrhage there will be complete adhesions. The danger is in partial adhesions where there may be great hemorrhage going on from detached part

Treatment :- (1) Don't hesitate to place patient on her back & grasping the Uterus press it strongly downwards between the fingers & thumb & you may sometimes thus breath loose & expel the placenta (2) In obst cases introduce the hand as in turning & carry your hand right up to the most distant part of placenta & start to detach it there, if you cannot start at the sides. Push the membranes between the Uterus & the Placenta & detach Placenta bit by bit till you get it totally detached. This is better than seizing it en masse & pulling it away. Don't drag it out, but squeeze it out, & your hand also by compression from without & then entracted will follow & less pain

(3) If you cannot separate the whole Placenta get off as much as you can. Examine placenta brought away & if incomplete pass in your hand again & try & extract the remainder

III Post Partem Hemorrhage

Causes :- (1) Atonic laborious labour rendering Uterus inert, or from the too quick extraction by Forceps or by pulling hard on Funis. (2) From Twin Births from large area whence placenta is detached & Uterus having been greatly distended is apt to be lax. (3) From peculiar conformation or morbid attachments

of Uterus. As when it has drawn from the main mass which remains attached & keeps up bleeding.
(4) Relaxed state of the Body - Commonest in Multi. Sparous women Uterus too feeble to contract.
(5) Peculiarity of Constitution. As if of a hemorrhagic diathesis bleeding freely from a scratch almost. Great proportion due to tearing across of placental vessels. Hardly any slight for uterus gradually contracts & arrests it by contraction, mouths of veins which are oblique & thrombosis at end of vein quickly occurs & arteries quickly contract. When Uterus remains lax you don't get the vessels closed. Or if there be delay of blood coagulating there will be hemorrhage during intervals of pains. The Uterus may be contracting firmly & still hemorrhage but in these cases it probably has to do with some abnormal seat of Placenta.

Time of Occurrence:- Of arises. May come on in first half hour. In all the cases within 15 minutes of expulsion of Placenta. May be as late as the 10 day. The most fatal cases are those which start with the expulsion or detachment of the placenta & goes on after its expulsion. The hemorrhage may go on into Uterus for some time, till it excites the Uterus to contract, then it expels blood in gushes

& prompts it out. When perhaps first attracts attention of practitioner. Uterus contracts but irregularly & not continuously. But discharge may be as a slow drain. Patient shows signs of loss of blood, faints &c & may die very quickly if hemorrhage be not stopped. May come on subsequently 2 or 3 hrs after birth of. generally occurs during 1st. hour or half hour.

Treatment :- Look for it in Multipara, Flaccid Uterus, Slow births, Placenta lower down in Uterus. Always give Ergot to hinder it But if it has come on :-

1. To see Uterus keeps full contracted

(a). By external stimulation & compressing through the abdominal walls

(b) External pulsation by introducing hand & empty. press the bleeding part between the two hands.

(c). Compress from within & without. One hand in Vagina on Post. Fornix pressing upon & the other hand externally on Fundus pressing down. Do it for half an hour if necessary

(d) Sudden shocks from Cold. By dashing on a cold wet cloth & pouring it on face from a height. It should act at once or no good. Chills the patient. Can may inject cold water into Uterus Usually stream after

The Americans have shown that injection of hot water causes contractions often & is said to be especially good for abortions.

Internally & externally we want a cloth to form 2. Keep the Uterus compressed by a band or some binder & compress, or a bowl, & also Ergot

3. If it don't contract try to bring it about by causing thrombosis in vessels by injecting haemostatics into Uterus as Perchloride of Iron (1 to 6 of Water) Vinegar. Tr. Iodine both been used.

4. Also compression of Aorta has also been used & you may carry it out when you are compressing the Fundus Uteri externally & you are acting in a two fold Reciprocal manner.

5. Carefully remove all coagula from Vagina & Cervix as well as from Uterus, not generally necessary to do this by passing hand into Uterus but do it by external compression

6. Employ transfusion of blood in extreme cases. Very difficult to come to an absolute idea of its value in these cases. But you can try it if you have the apparatus.

Adhere to the following Rules

1. Accept after Contraction by hand or pad, if any tendency to relapse. Try Ergot or Injection

2. No movements of any kind as of head &c
3. To keep her cool, quiet, & perfectly free from all excitement
4. If restless & irritable give bromide as a general sedative
5. If exhaustion be great give cordials & stimulants as Brandy, Coffee &c. If these cannot be borne from vomiting use injection of Sulphuric Ether.
6. Watch her carefully for hours for fear of return of the hemorrhage & be within call.

Lecture N/3 March 19th - 1878

* N/4

Rupture of Uterus

Frequency - Fatality
Period of occurrence
A. During Pregnancy B During Parturition
Causes during Parturition
1. Direct injury from instruments
2. Incoordinate action of Uterus
3. Previous disease of Uterine Walls
4. Irregularities of Pelvis or Child
Seat - Direction & Extension of Rupture
Premonitory symptoms
Before Labour
During Labour

Symptoms of Actual Occurrence

Varied by extent - complete or incomplete
" " rapidity - sudden or slow
" " seat - neck of fundus internal or external

When Complete & Rapid

1 Pains & feelings of laceration
2 Abdominal pain & tenderness & distension often a time
3 The shape of Child & Uterus to be felt
4 Recession of the Presentation
5 Immediate arrestment of Uterine Action
6 Hemorrhage from Vagina
7 Emphysema of abdomen
8 Death of Child
9 Constitutional Symptoms

Diagnosis of Rupture of Uterus:- from
1. Premonitory & other symptoms.
2. Feeling it tear.

Treatment
A. Prophylactic
B. When rupture has occurred
I Be expectant Treatment
II Delivery through Genital Canals
(1.) If head in passages easily, turn fix head & use forceps or crochet
(2) If head too mobile may leave

(3) by rupture the Uterus & make it contract
(4) Use sedatives & astringents subsequently

III by astrotomy

4/8 D.C. died under expectant treatment
6/8 D.C. " " delivery per Vias Naturales
2/4 D.C. " " by astrotomy

In some cases it is the only possible operation

(a) In Accidental rupture during pregnancy
(b) In accidental rupture during labour.
(c) When Pelvis is contracted.
(d) When child is escaped into abdominal cavity

Lacerations of other Organs

Spleen, Liver, Caecum, Epigastric vessels
Internal Iliac Vein, Pudic Vessels, Urinary bladder
Urethra, Vagina.

Perineum :—

Seat
Extent
Causes
Treatment

*1/1

Rupture of Uterus

Frequency :-

3 1/4 in 16,65 1/4 or 1 in 1 1/4 82 cases (Collins)
2 in 1,180 or 1 in 2090 cases (Dacend)
8 in 33,3 1/4 8 or 1 in 4168 cases (Ramsbotham)

Fatality :- Very great

Cause :- A. During Pregnancy - It may be observed 2nd month from a blow or a kick. Uterus full 9 months is from a squeeze between a wall & a cart.

B. During Parturition - (1) Very from instruments may be only slight tears at first but extend after.
(2.) From inordinate action of uterus as from some obstruction in Uterine Passages or in size of body passing which thus includes (1).
(3.) Often from previous disease of the Uterine walls.

Seat - Direction & extension of Rupture :- Cervical canal opens up before os to admit. But suppose some obstruction at os, the Uterus goes on acting all the harder & obstruction not giving way it acts on body of child & ruptures the Cervical Canal & child is born into Cervical Canal alone. In cases of pendulous belly the head is drawn down into front of cervical canal & not into V again. So it may be in face & trunk presentations if not attended to

the cervix getting very much thinned & expanded.
So also in cases of hydrocephalic heads.
In these cases cervix thins till it gives way
some where
Cervix uteri and Vaginal Uterine Principal
Wall may burst in some cases without there having
been any disease. May be softening from
fatty degeneration even when no prolonged labour
Seat most frequently in cicatrix. Rare in body of
uterus & then generally after Cesarean has been
before performed & weakened the part.
May be in Ant. or Post. Wall but most frequently
one side & that generally the left side of Uterus.
Often thought it is in the posterior wall especially in
pendulous cases.
Some are caused by pending against bony projections as sacral promontory but these belong to
a different category
Direction: May be transverse longitudinal or
Oblique
Extent: Complete or Incomplete. May be of
only serous covering of cervix where
layers may get separated. In other cases whole
uterine wall gives way & child escapes into
abdominal cavity. Some rare where tears

starts externally & goes through nervous coat.
Premonitory Symptoms :- Before labour - May be pain in uterine walls, afraid of being touched there. Any previous operation eg ovary, ruptures &c. Generally occurs in women who have had one or more previous difficult labours. During Labour :- Any obstruction or any mal presentations. Often very painful pains but not effectual in advancing head. Also where pains of a crampish sort & opposite pubes.

Symptoms of Natural Occurrence :- If any. Sometimes nothing. If acted by extent - If incomplete not so pronounced as if complete. If acted by rapidity, suddenness or slowness. If acted by seat - whether neck fundus, or external & internal

Symptoms when Complete & Rapid :-

1. Pains & patient feels something has given way during a pain, but many not feel this.
2. Abdominal pains & distention & tenderness
3. Shape of child & uterus - Can feel outline of childs through abdominal wall & can feel uterus low down
4. Recession of Presentation - If goes back & you dont feel any part presenting.

5 Diminution or arrestment of Uterine Retrac - May be complete, but not always so, for it is usually in state of 3rd stage of labour & contracts from time to time.

6 Hemorrhage may occur from Vaginal canal & this may be your first intimation & you know there is no placenta previa

7 Emphysema of Abdomen not early & not a constant occurrence

8 Death of child commonly occurs

9 Constitutional Symptoms: - May be complete collapse, shocks, fainting. But not always for there may be a sense of relief from cessation of uterine action.

Diagnosis of Rupture: -

1 From premonitory & other symptoms

2 May feel tear between thin part of Cervix & thicker fundus or rather body.

Treatment: -

A. Prophylactic - Study progress of labour & if any premonitory symptoms promote delivery & suspend uterine action till you can operate to remove obstruction or lessen size of child

B. When rupture has occurred - An expectant treatment has been used. Often the child

& generally the mother also. May be prolonged suppuration & retraction of pelvis through abdomen &c. But 4/5 P in Cent die.

II Delivery through Genital Canals — (1) By forceps if you can reach head & it is fixed in brim of P. Use Simpson's. Deeply chloroform. Be sure the crochet is sacred. (2). Version Version by turning but legs. Amnii has escaped, little space for hand, hand introduced tends to increase the lesion & so do feet & body of child but if you will turn you must bring down both feet at once. This is when head is mobile. (3). Whatever you do to extract child, always empty the uterus & make it contract.

(IV) Use ecbolics & astringents subsequently.

III Gastrotomy: —

4/5 P. C. died under expectant treatment
1/5 P. C. died under delivery per vias naturales
2/5 P. C. died under Gastrotomy

Has some cases it is the only possible operation as in A. In accidental rupture during pregnancy
B. In accidental ruptures during labour
C. When P. dies is contracted: When it can be quicker & safer extracted by Gastrotomy & also can clean out parts well

2. When child has escaped into abdominal cavity then it is certainly the only mode.

Lacerations of other Organs:-

These were also such as of the Spleen Liver, Bowels, Hypogastric vessels, Internal Iliac Vein, Pudic Vessels, Urinary & Genital Urethral & vaginal & are often very dangerous & frequently fatal Also Rupture of Perineum of which I shall speake more fully next Lecture.

Lecture 4th March 19th 1875

* 4/8

Displacement of Uterus

1. Inversion of Uterus

Definition Degree:- Partial. Complete

Period of Occurrence

During 3rd Stage

After 3rd Stage

Causes

1 Artificial interference

2 Spontaneous inversion

a. Uterus atonic

b. Uterus irregularly contracting.

Symptoms. Diagnosis. Results.

Treatment :-

A. When recent

1. Reduce as rapidly as possible
2. To retain the reduced organ excite the Uterus into full contraction before removing the hands.
3. If first attempt fail repeat it cautiously from time to time (under chloroform)

B. When of long standing

1. When chronic & bound down by inflamatory adhesions treat as a case of Prolapsus
2. If health breaking down under discharge, may we amputate the Uterus?

Complications from Displacements

II Prolapsus.

III Hernia :- Inguinal Umbilical

Treatment :-

1. Reduce hernia if possible
2. Hold up Uterus in axis of brim
3. Turn
4. Perform Cæsarean section

Chest Complications

Complications :- Diagnosis & Causes

Bronchitis Pneumonia Pleurisy

Organic disease of Heart, Lungs & Blood Vessels

Syncope :- Prognosis in Cardiac & Pulmonary complications

General Rules of Treatment

1. Avoid anything which would heat, fatigue or oppress the patient.
2. Prevent her making any muscular exertion to promote labour
3. If the symptoms be at all urgent have the passages dilated & deliver by Forceps or Turning
4. Do not empty Uterus too suddenly
5. Apply a binder previously & tighten it as the Uterus is evacuated
6. In double Bronchitis may require to administer an Emetic to keep the air tubes free

Puerperal Convulsions

Eclampsia

1 Before labour
2 After labour
3 During labour

Paroxysm Duration Interval Recurrence

Lacerations of Perineum &c

Seats - May be near where was base hymen or may be in V vestibule or about Nymphae or round about urethral orifice

Perineum :-

Seat - At different places. Head pressing down & backwards, in the greatest number of cases the tearing starts behind in V aginal Mucous Membrane & may go on & form a vaginal flore & not touch the cutaneous surface of perineum at all, find a buried state of things. At other times the "central rupture of perineum" occurs the childs head escaping through the rupture & not through the Vagina. Wound heals in some cases entirely & others nearly so. But this central is the rarest variety. More frequently laceration runs from margin of perineum & tears through V estibule. May have it from this point to any extent & direction, to tearing through the whole perineum & back wall of V agina the Sphincter Ani & Ant. Wall of Rectum being torn through.

Rare that rupture starts at skin externally

Causes :- 1 Fetal Lacerations of Pelvis pushing the head backwards against the

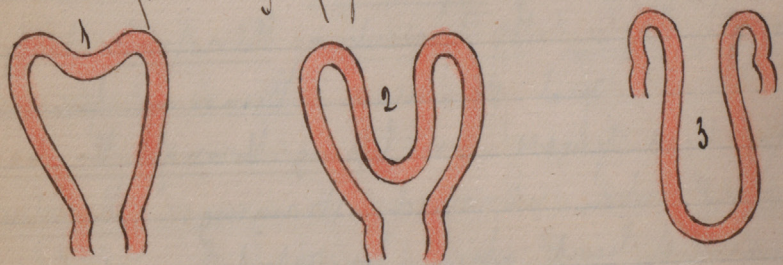
perineum. 2 Arch of P does unusually narrow & head of child does not fit into it.
In soft structures :- Vulvar opening directed too much forwards. Or too rigid or too narrow Vagina. Large size of Child - Large size of head stretching it & tearing it & then shoulders increasing tear. Certain Posterior Positions apt to cause it. Also from Anal Presentations. Too thick passage of Child. Powerful Straining when parts not sufficiently dilated. Too long delay & congestion caused thereby. Use of Forceps themselves or improper use. Turning. Cephalic Version & other Operations
Treatment :- To prevent - Chloroform to prevent great straining. Removing Forceps before head passes, or lifting through the head quickly when not much straining. Resisting descent of head when too rapid.
When Laceration occurred - If very slight requires no interference leave it to Nature Small gash looks much less when Perineum contracts. If rupture passes through Sphincter Ani you must Operate. Bring together the edges of laceration & sooner you do so the more likely you are to get perfect union

Put in some deep stitches to keep parts together & some superficial stitches in skin. Pills often useful. If this be not done within 24 to 36 hrs after rupture, it is no use at all doing it during the Puerperium if during Lactation. May be ch on Retention of Urine & Faeces. If we delay 36 hours & bring edges together as completely as possible

Displacements of Uterus

1 Inversion of Uterus

In different degrees as seen in the following figures



Ch may be found at Fore of Uterus 1. May be a large sac 2. Or may be complete inversion 3 & even some of Vagina inverted & protruded through the Vulva. Sac is now lined by Serous Membrane. May be Partial or Complete.

Period of Occurrence :- 1 During 3rd stage. Some may also say so, & certainly

very frequently 2. After 3rd Stage
Causes :-

1 Artificially - from pressure from above when seeking to cause expulsion of placenta, but this is rare. More frequently from dragging of Placenta from below as when retained. Thus Placenta drags down part of wall to which it is attached. These forms are but rare though

2 Spontaneous Inversion - Varieties 2

a. Uterus Atonic & Inert - Placenta may be in a cavity. Uterus is flaccid & placenta attached near at top of Fundus & tends to drag in the Uterus & patients exertions drive it further & further in till it gets to internal Os then patient feels something pressing & bears down all the more & result is complete inversion

b. Uterus in irregular action - But mostly at Placental right & flaccid there & Fundus hangs in there & excites Uterus to action & it contracts most actively round flaccid part which acts as a foreign body, pushes it down & down till it invaginates a part just as in Intussusception of Bowel & then it gets drawn further down & ends in complete inversion. This refers to all parts of Uterus

as well as of fundus.
Some have imagined a contraction beginning at the ovar end then getting placenta & a part drawn through &c & rest following
Symptoms :- Intense. Often those of shock from its suddenness. Losses of blood from congested syncopal uterus. Tenesmus. After pains. Straining & bearing down. Tumour in Vagina or externally
Diagnosis :- If a rounded fundus felt through abdominal walls. May see rod, or ovarian tumours. If allows it use with the finger & trace it out.
Result :- May be sudden death from shock. Or may die more slowly from hæmorrhage or exhaustion from discharges & bleedings. Or it may become a Chronic affection & then it is often difficult to tell, a large body like a fibroid tumour or a large polypus lying there, but it is redder softer & more velvety looking. But must make combined internal & external examinations & use Sound when you first use Uterine canal to pass it into. Or might pass a finger into Urethra & another into the Rectum & so feel the parts between

This state is sometimes overlooked after labour. The women complains that she felt great discomfort & was long in drying up & the discharges bloody the consequence is it becomes Chronic

Lecture 4/5 March 21st/78.

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Supposed exciting causes (of Eclampsia)

1 Plethora during Pregnancy
2 Difficult Labours
3 State of Atmosphere
4 Hysterical Diathesis (albuminuria)

Immediate Causes

1 Toxaemia
   a Urea
   b Carb. of Ammonia
   c Creatine
   d Alkaloid poisons
2 Oedema of Brain from hydraemia & increased blood pressure in arteries

Results & Prognosis

General Rules of Treatment

1. Loose dress. Raise head. Prevent self injury. Allow access of fresh air.
2. Bleeding in special cases.

3 Open the bowels freely & speedily
4 Act if possible on kidneys
5 To control muscular action & subdue nervous irritability & arterial tension by Chloroform Chloral & Opiates
6. If passages be in a fit state use Forceps especially if there be repeated pains

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Treatment of Inverted Uteri

1. When Recent - Reduce as quickly as possible. Do not you detach the placenta? Some do & some don't. In most cases best to detach placenta first before reducing for it lessens bulk to return. Return it by pushing it up in with the fingers forming a cone, or with doubled up fist against fundus holding with other hand above brim. If any contraction best to grasp the whole fundus in your hand & return by cervical part first not the fundus. Some start to return it at the side. But ale ways make counter pressure above.

If parts still flaccid reduction is easy. Cases Uterus to contract firmly as by hand

in Uterus. Injections of hot & cold water would be
If first attempt fail repeat it from time to time
cautiously under Chloroform.
Sometimes becomes retained by an india rubber
bag the vagina, which keeps up a continu-
ous pressure of Uterus & distends the parts &
Uterus has thus returned
Some proposed returning it per Rectum.
Some proposed to make incisions at part
about to Uteri so as to enlarge opening.
B. When long Standing:- In these cases
the incisions have been used. An American
surgeon used a cup to press against fundus
by means of spun chest & thus keeps up
pressure till Uterus returns
II Prolapsus:- Requires supporting. Dressings
Child stew about
III Hernia:- Reduce if possible. It is
sometimes caused Uterus return. It is
given rise to Swelling, Faeces, Embarrassed
for treatment see Table
Complications of Chest
Emphysema:- Air gets into cellular tissue
around Bronchi & may pass
down as far as chest. Sometimes occurs

during labour will or will not prevent disease. Or, doubt it is produced by the straining during 2nd Stage. She has some miscarriages in weeks. Not dangerous & will pass away in a few days. Stop her straining. Terminate labour

Bronchitis, Pneumonia, Pleurisy, & Organic disease of Heart, Lungs & Blood Vessels all recent & may cause Syncope :- Prognosis doubtful as Cardiac & Pulmonary complications.

General Rules of Treatment of Any Chest Affection.

1 Above all avoid straining, heat, fatigue &
2 Hinder any muscular effort
3 If urgent dilate passages & deliver by forceps or Turning
often may give Chloroform in these cases & it is rather Unexpected
4 Draw empty Uterus too quickly
5 Apply a binder & tighten it as Uterus is contracted
6 In Bronchitis may have to give an Emetic

Puerperal Convulsions

Labour Pains may have begun, or they may not start till after labour over

occurs about 1 in 300 cases.
Like well marked epileptic fit. May last
10 minutes. Intervals between
may be no previous intimation. Starts with
twisting of face, rolling of eyeball, face
gets twisted, teeth grind, may bite tongue,
hands grasped tight. Head and hand round
in fierce contraction. Then fit gets clonic
& arrays[illegible] waves in length. Breathing stertorous.
Pulse very frequent. Pulse & temperature higher
Cases pass into drowsy & even completely coma-
tose. This is one of mildest kind of
eclampsia. May be slight as "Petit Mal"
& gradually become more pronounced.
May have been headache, vomiting. May
Amaurosis, deafness &c.
Recurrence :- May recur or may not, cannot
tell. In intense cases they recur.
No necessary connection with Uterine contractions
fit may occur either before or after Labour
Supposed exciting causes.
1 Toxhaemia in pregnant women, once brought.
2 Difficulty of Labour, stillborn &c.
3 State of Atmosphere - such fine clear Ramsbotham
& others had to do with it

may influence the system so as to develop the causes on the system.

Predisposed Patients - In large portion of cases there has been previous swelling & edema, & if on giving primipara you should at once examine the urine & you often find she has Albuminuria, & this disease of Kidneys may advance. Do not know its relation to Pregnancy. May be from pressure & hence more common in Primipara the Multipara for there Uterus does not give way as readily. Whatever may be the Pathological Relation there is the Albuminuria.

Immediate Causes

Some say in. Poisoning of blood from failing of Kidneys eliminating poisons, some say defect of blood from Ammon. Carb. others to Creatine. Alkaloid Poisons as decomposition of various products. Anyhow there is a poison accumulating in blood & not eliminated by Kidneys & affecting nervous system & consequent effects.

Edema of Brain: - Explanation of Albuminuria & Edema of Brain, blood hydraemia. Increased blood pressure in left ventricle & hence transudation of fluid & this

causes Coma, & into middle part of causes Convulsions. This seems to be most accepted cause of Puerperal Convulsions.

Thus drawbacks - often find Albuminuria & this no convulsions & even severe convulsions & no albuminuria.

Results :- Often fatal, may be from Apoplexy or without, may be from means used to hasten labour. May recover

Prognosis :- Doubtful for both Mother & Child In many cases convulsions pass off. More hopeful when patient recovers shortly after each fit. If fit after fit & no waking up between very doubtful.

Also depends on mode of hastening delivery Analysis, Mental disease may remain. Very liable to inflammations & fevers of the Puerperium

Does not generally recur in subsequent labours unless chronic Kidney disease.

Always a grave condition & requires

Treatment :-

1. Put her so that she cannot be injured, as on a mattress on floor. Loose dress. Plenty of fresh air. Cork between teeth. Raise head.

Treatment of Eclampsia (Continued)

7. If fetal head high & passages unprepared rely on time & relaxants, but if there be immediate danger deliver by Forceps forcing to subpubic or Dilatation of Cervix.
8. Where there is Albuminuria before Labour induce Labour if symptoms be on attack & severe.
9. The after treatment keeps patient low & quiet & bowels & bladder free.
10. In subsequent pregnancies watch the condition of the Kidneys & in first attack shortening ward it by keeping down the circulation & by Diuretics, Milk diet &c.
11. Use Purgatives & Antispasmodics in Hysterical Convulsions & Stimulants in those arising from loss of blood

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2. Once universal rule to bleed. And still persevered in when thought to be caused by poisoning of blood. It still fits in with the last & third theory of Edema of Brain & is still carried out & must clearly be some benefit

from it, though cannot exactly tell why. There is immediate good result from it. Must use the lancet not simply leeches.

Prof. Simpsons thinks it should be confined to cases with severe paroxysms & an immediate or early chance of delivery. If on after a time blood vessels soon get filled again & with more hydraemia. Labour should terminate within 12 hours. Some repeat bleeding, but Prof. Simpson never did

3. Open bowels well as with Croton Oil on back of tongue, Castor Oil injection &c

4. Act on & stimulate kidneys to secretion as by Sponge Iodine soaked in Digitalis to loins Use Diuretic salts as Pot. Acet. Acetic Acid

5 Control muscular action & arterial tension by giving Chloroform which also tends to sub-due nervous irritability & rests patient. Use it with each fresh paroxysm on any symptoms appearing in the face, & may ward it off. Liberal is installed is of good. Some give Opiates hypodermically, not good to give it alone, but she should be kept under Chloroform till opiate acts. Potass Bromi.

has often benefited by its action & especially in cases of disordered action of the kidneys & from pelvic Irritation. Often it does no good. It is best combined with Chloral

6. Actual Interference with Process if passages in a fit state.

7. If head high & passages unprepared, relax canal as by douches, India rubber bag, but avoid causing local irritation. If immediate danger use active dilatation of cervical canal. Use "Repudiment of Price" Long forceps, Simms, Embryulcia &c

8. If Albuminuria before Labour induce premature labour if disease very marked & threatening convulsions

9. Keep her low & quiet, & bowels & bladder free. Give milk diet avoiding nitrogenous food.

10. Watch patient in subsequent pregnancies. Nurse her carefully. See that Uterus is strongly contracted. She may remain somewhat stupid for a weeks or so after & eclampsia has ceased. If Renal Conditions be discovered early keep patient on milk diet for weeks. it is sufficient for supporting both her & her child. Give diuretics. If of Iron is of

greatest use in the cases I especially recommended by Dr. Bright

11. Some convulsions are only Hysterical & are rare, of little importance. Use stimulants, Doses &c

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Complex Labours

Complications on part of Child

Prolapsus Funis

Comparative frequency

Causes, Period of Occurrence

Prognosis { a. for Mother & for Child

Rules of Management

1. If pulsation in cord entirely ceased don't interfere

2. If you discover it before membranes ruptured
   a. Endeavour to return above head.
   b. If the attempt fail & passages well dilated turn child by bi Polar method.

3. If membranes already ruptured & head entering or entered Pelvis
   (a.) Endeavour to return it & retain cord

beyond head

a. With fingers
b. With sponge
c. With rough body
d. With appropriate instrument
e. By lowering over a limb
f. By postural treatment.

(B.) If you cannot return it 2 related ends. Place it in most empty space available

(C.) If necessary hastened delivery

Plural Births

Detection during pregnancy
Relation of Twins
Management of Twin Cases

1. Labour of 1st child conducted as a single birth
Simultaneous inspection & palpation of both children
2. Two attendants - if at midwife
3. Beware of pulling on cord
4. Apply a binder
5. Wait half an hour for return of uterine contraction
6. If uterus inactive excite contractions.

7. If no return no hours deliver by Podalic version
8. Deliver 2nd child by Version as soon as patients state permits no
9. a. Presentations of Trunks or Shoulders
   b. Hemorrhage to umbilicus
9. Re-examine for another child
10. Remove the two placentas as one

Double Monsters

1. Bodies nearly separated, united in front.
   Modes of Presentation
   Modes of Delivery
   Treatment
2. Bodies nearly separated, united back to back.
3. Bodies fused Heads separate
4. Bodies separate Heads fused.

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Complex Labours
Prolapsus Funis

1 in 100 in France. 1 in 150 in Britain.
More frequent in Multipara than in Primipara
Two conditions (1.) presentation of cord (2.) Prolapsus

A distinction of no practical import

Causes:- Relaxation of Cervix Uteri & hence more common in Multiparæ.

Thought to be from large escape of liq. Amnii which re-ashes down funis. Also it makes rounded instead of broad.

It is more frequent in Anal Positions & Presentations though often not noticed. Thus in Pelvic & Transverse presentations

Also where brim is narrow & more particularly when irregular in form & hence head does not fit in well & cord falls down.

Also often when Placenta is Marginal in situation, or when cord is attached to edge of placenta. In these cases funis is often very long may be 2 3 inches. Might be round the neck of child or by side of its head.

Another cause is position of patient, hence greater tendency in France & Germany where patient is on her back

Period:- May be before or after rupture of membranes. Can recognise it by its pulsation before rupture & after that it comes down & can be felt & can then be easily told though no circulation. If not cut and

if one can pull some down & looks

Prognosis :- For Mother - Bad from what is the cause of it, as bad presentations narrow pelvis &c.

For child :- One of most dangerous 160 dead to 100 living by Prolapse. But this is rather above average. If membranes ruptured there is more danger & also more we heard than breech on account of harder body compressing it & more dangerous in breech than footling cases. If cord get stretched over its head, or if child rides on cord it is apt to stretch & tear loose the placental.

If Rules of Management see Table Don't interfere if cord not beating for some time, but listen with stethescope if foetal heart beats Before rupture of membranes - (a) Try to return cord above child's head, at intervals of pains, placing the patient so the gravity may tend to allow funis slip up, by elevating legs. (b) If you fail to return & passages well dilated turn child by bipolar method. But never give mother any pain for child's sake If membranes ruptured & head entering or entered (A) Return & try & retain it in

position, such as by a Repositer, a gum elastic catheter makes a fair one by means of of the wire & a string, to hook cord on to & return it & retain it in pelvis.
Dr Thomas of New York says should place all patients in knee & elbow position which thus enables the weight part & cord bends to return by gravity. You must keep her in this position. This mode generally succeeds
(b). If you cannot return it. Place it into the Iliac-sacro Space where it will be least exposed to compression.
(b). If needful have delivery by Forceps

Plural Births

Twins may both present alike or vary. May be both head or both breech &c.
Greater danger to mother in Plural, being 5 times more fatal than single births. More tedious labours, uterus more distended & uterus acting at a disadvantage. Liable to inertia, tedious separation of placentae, also to hemorrhage for placenta is larger. Also greater risks of septic absorption, fever, convulsions &c

Management of Twin Births

1. Labour of 1st. child just as a single birth though you have generally detected that there are two from large size &c.
2. Tell the attendants, that there is another but dont tell the mother for fear you alarm her & stop uterine contraction.
3. Dont pull on funis for it might be a united placentae or round other child needs &c. Give a formal hand on it.
4. Apply a binder to assist return of uterus to its normal strength
5. Wait half an hour for pains. Some say extract second child at once, but it is far more deadly than waiting its natural expulsion as shown in Prague & Vienna Practice.
6. If ½ hour, & pains not returned try & excite uterine action by compression & ergot, friction &c. Will to give ergot at once on births of 1st. child.
7. If no pains in one hour deliver by podalic version.
8. Cannot wait in some cases as when funis or shoulders present, for might cause exhaustion & other danger, therefore deliver at

once by Version

Also of Hemorrhage or Convulsions.

Q. On expulsion of 2nd child feel if any more children

A. Remove the two placentas as one, after the births of both children. If you extract first placenta after first child born you may cause intrauterine hemorrhage during birth of second.

In all these cases give Ergot at once on births of 1st child & keep up compression all through so as to cause firm uterine contraction & thus hinder hemorrhage which is the great danger in these cases.

Lecture 71 March 26th/78

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Puerperal States & Diseases

General Phenomena

1 Pulse
2 Temperature
3 Nervous System

4 Condition of Uterus

Retrograde metamorphosis

a. Changes in Walls

Rate of contraction

b. Changes in Interior of Uterus.

c. Uterine Discharge – Lochia

Characters

Quantity

Duration

5. Condition of Excretories

Intestinal canals

Kidneys

Skin

6 Condition of Digestive Organs

7. Condition of Mammae

Jan 4/4 milk appeared 1st day in 22

" " 2nd " " 170

" " 3rd " " 347

" " 4th " " 266

" " 5th " " 100

" " 6th " " 22

" " 7th " " 5

" " 8th " " 4

" " 14th " " 1

Diagnosis of Puerperal Condition

Skin

Vagina

Uterus

Breasts

Pathological Tendancies

Local

Changes in Genitals

" " Ovaries

" " Breasts

General

State of Skin

" " Bowels

" " Blood

" " Nervous System

Management of In-lying woman

1 & State of Uterus

a. Spasmodic Contractions - after pains

Hysteralgia

Period of recurrence

Causes

Diagnosis

Treatment

2. Variations in rapidity & extent of retrograde changes

Involution
Superinvolution
3 Changes in Secretion & discharge of Lochia
a. In Quantity
1. Diminished
1st from local mechanical causes
2nd " from constitutional conditions
2 Increased
a. at first
b. at later periods
* §2

Complicated Births

In ordinary births cases sometimes both heads are presenting at same time, though generally one is lower than the other. May be same with limbs. Keep membranes as long as possible & you may compress & detain one head.
But sometimes they are locked & may be in two forms, the head of one & thorax being driven in at once. Or may be legs & body of one born, & then head of other comes.
Diagnosis:- Not difficult. Can feel two

heads perhaps or two parts of different bodies
Feel 1st head & then 2nd ~ head after chind of
1st. child
Treatment :- Try to unlock by pushing back
the last. If not apply forceps to
head of 1st ~ child & deliver it supporting the
2nd ~ child's head. Sometimes cannot & then
must lessen one of children, & as 1st child has
best chance of life, therefore break the 2nd ~
head.
In case of two heads locking chind to chin, the
body of one being out of Uterus, you can
easily feel position. Then try to drag head
of 2nd child past body of 1st. with forceps
But cannot often do this. Then if cord of child
already partly born pulsates break the 2nd ~
child's head. If cord dont pulsate decapitate
the 1st. child & try & save the 2nd ~ child.

Double Monsters

Form united
Form main groups.
Probably developed from duplication of one ovum.
1st. Bodies nearly separated, feet united in
front:- As in "Siamese Twins". At Berlin

feet may present & is most favourable, but it is against the head. In most cases delay until head entering pelvis & generally turning has to be performed & bring down the feet first & carry them far forward.

Both is most often premature & monsters are generally small. Often one head has to be decapitated

2nd Bodies nearly separated - united back to back as in "Double headed Nutcracker" who are united by sacrum. Treat as No. 1.

3rd Bodies fused. Heads separate. These are the worst cases often

4th Bodies separate - Heads fused These cases are the worst kind, & often have to decapitate the fused head.

Puerperal State & Diseases

1. Pulse:- falls after labour & is succeeded by an acceleration for some hours after & then about 24 hrs after it beats slower again for 10 or 14 days.
If pulse rises above 106 some morbid change
2. Temperature:- Slight rigor at close of labour

1st 12 hrs. a slight increase, 2nd = 12 hrs a slight falls again

3 Nervous System:- High degree of nervous excitement during Pregnancy, but collapse & exhaustion after labour. Sometimes great nervous instability.

4 Condition of Uterus :- 12 in. length, 9 in in Width at close of pregnancy. It empties at labour. During labour it starts to change from muscular contraction. If fibres get exhausted & some fatty degeneration is found even during labour. Uterus after labour is 4-5 in. in transverse diam., 4½ to 5 in. in length & weighs lbs 2 & is firm rounded & hard. After it relaxes, as it may be 5 - 5½ in long at end of 24 hrs. After it steadily diminishes especially on 2nd day. On 4th day still somewhat soft. At end of a week it weighs lbs 1 At 10th day fundus gets up. By 8th or week it is restored to its normal size

Its diminution occurs:- 1st from Uterine Contractions & then from fatty degeneration of muscular fibres, new fibres being formed from remaining nuclei. Ligaments relaxed get stronger & firmer

2. Interior of Uterus :- On Placental Area are the thrombi. Lower rest is ragged area from which decidual membranes separated. By 18th day there is a perfect reproduction of membrane & uterine follicles

Lochia :- For several hours after labour almost purely hemorrhagic & varying in quantity may be fluid & clotted. May use 10 to 12 napkins in first 24 hrs. After this for 2 to 3 days there is still "Lochia Rubra", tinged with blood. On 4th & 5th days discharges get less & less blood, watery mucous & blood corpuscles & shreds of membrane & called "Lochia Albicans." By 6th day contains pus corpuscles By 9th day White yellow or creamy, & fat mucous & other corpuscles, & sometimes a parasite which is common

Amount - Varies. May correspond to ordinary menstrual discharge. More profuse & lasts longer if don't nurse child.

Duration - If no 2 or 3 weeks if the nurse If not 1 month or longer

5. Condition of Mammaries :-

Bowels apt to be torpid from change of pressure. Kidneys apt to act too freely &

generally Profuse perspiration
Condition of Digestive Organs :-
Appetite diminished, partly from exhaustion & partly from want of exercise &c.
Often great thirst, & wants food in fluid form
Condition of Mammæ
Where milk comes freely & properly all goes on well. See table at start of Lecture for date of appearance of milk. Often pulse & temperature rises with its appearance
Diagnosis of Puerperal Condition
Skin of Abdomen relaxed & placed striæ well marked. Breasts turgid if not secreting. Vagina - fissuring, bruising & lacerations, fissuring of cervix. Size & thickness of walls of Uterus.
Pathological Tendancies
Local
Lacerations of Cervix & Vagina in 8 % out of 100.
Changes in Pelvis sometimes as relaxations of Ligaments even till patient cannot walk
In Breast - Inflamations & Abcesses &c
General.
Skin - Great perspirations, give Acid

helped. Let the Bowels - Apt to constipation, keep free, if not emptied by 3rd day give Castor Oil in a hot drink with a stimulant as Brandy on the top of it, or coffee. Give and Injection. After may let them get up to the Commode, for less harm is done to your patient by her sitting for 2 or 3 minutes than by her severely straining herself over a bed pan, which some women cannot use at all.

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3. The quality
2. The State of Urinary Bladder
   a. Retention of Urine
   b. Incontinence of Urine

Febrile Diseases & Puerperium

1. Milk Fever
   Symptoms
   Diagnosis
   Treatment

II Ephemeral Fever

Symptoms

Diagnosis

Prognosis

Indications for Treatment:-

1. Diminish violence & duration for each stage
2. Do not use sweating stage till headache be removed.
3. Beware of cold in bringing patient out of this stage.
4. Prevent return by guarding against exciting causes.
5. Administer Tonics (as Quinine) if disease be recurrent.
6. Attempt to suppress in first stage by diffusible stimuli, emetics &c.

III Miliary Fever

IV Zymotic Fevers in Puerperae Scarlatina &c.

V Rheumatic Fever

VI Septic Fever

Source of Infection

a. Septic matters developed in individual

b. Septic matters imported from without

Nature of Poisons

Results of Poisoning

1 Local - Phlogogenic

2 General - Pyrogenic

a. Septicemia

b. Pyohemia

c. Pyemia

Symptoms & Diagnosis

Prognosis

Treatment

A. Prophylactic

B. Curative

1. Local measures

a. Correction of discharges

b. Sedative to pain

c. Resolve congestions

d. To subdue meteorisms

2. Constitutional Measures

a. Allay nervous impressions, pain &c

b. Sub-due vascular excitement
c. Depurate the Blood
d. Support strength of patient

Table showing relative frequency with which different parts of the body have undergone recent inflamatory changes in 500 cases of Puerperal Fever

Seat of Inflamation	No. of Cases	Per Cent. of Cases
Interior of Uterus	34 2	7 1/4 . 4
Veins of Uterus	34 9	6 9 . 8
Peritoneum	32 1	6 4 . 2
Lungs & Pleura	20 2	4 0 . 4
Lymphatics	12 9	2 5 . 8
Ovaries	7 8	1 5 . 6
Cellular Tissue & Muscles	4 6	9 . 2
Veins, not Uterine	4 0	8 . 0
Brain & Membranes	2 3	4 . 6
Spleen	2 1	4 . 2
Vagina & Pudenda	1 9	3 . 8
Bones & Joints	1 8	3 . 6
Kidney	1 7	3 . 4
Stomach & Bowels	1 3	2 . 6
Pericardium	1 2	2 . 4
Mamma	4	1 . 4
Fallopian Tubes	5	1 .
Bladder	4	. 8
Cervical Gland	3	. 6
Heart Substance	3	. 6
Iris	1	. 2

Table Continued

Throat	1	2
Larynx & Trachea	1	2

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Keep patient at rest in bed for a week at least. Must not sit upright for some time, except when she gets up to evacuate bladder & bowels.

Uterus :- Attend to it. Attend to any lacerations, discharges to be noticed. No books or newspapers to be admitted into room for some time for fear of any nervous shocks

Diet :- Bruce kept low for 10 or 14 days. But now we guide ourselves by the patients state. 1st day - beef tea gruel &c seconds - white food, fish &c. 3rd day - more solid food till by & bye gets to regular diet. As a rule no stimulants

Attendance - must be regulated by state of patient. See her at least for 1st 3 days & till she is out of bed occasional visit

Attend to Bladder - Bowels & Breasts

On getting up let it be first only on a sofa & gradually advance.

Marked Deviations in Lying-in Women

I. In State of Uterus :- Should be steady contr-

1. After Pains :- Involuntary contractions & there there will not be much after pains produced by contractions. After pains generally come on when B^r has. Often from solid bodies in Uterus, as Clots, therefore worse in Multiparæ.

Diagnosis :- Ab region, fever, hemorrhage &c

Treatment :- Empty Uterus as by fingers, hot water injections.

Ergot to contract Uterus

Opiates. Chloral

2. Varieties in Rapidity & extent of retrogressive Changes :-

Complaints of hemorrhagia, Leucorrœa &c for months after & find the Uterus above its normal size from Subinvolution which may be caused by:- tedious delays in 3rd stage, also by ill or lactation which hinders the proper contraction of Uterus which is often shown on first putting a child to breast it causes a reflex contraction of Uterus. Subinvolution may be caused by hindering its sinking down into Uterus as by tight bandaging or when patient gets up too early (or any inflamatory states,

or any obstruction to free discharge as clots, fragments &c all tend to hinder outlet of uterine degenerative matter &c.

Treatment of Subinvolution:- Diseases of Women &c.

Superinvolution:- Subsequent to births of child either partial or complete Amenorrhœa & Sterility. On examination can find no reason which may consist of only a fact. On passing a sound Uterus measures only an inch or inch & a half In some cases walls get thin & friable & sound passes easily through Uterine Wall Simpson has never yet seen a case in which sound passed into Abdominal Sides though some assert it has done. Causes:- In some cases patients have bad constitutions in some from Inflammation, Constriction & Atrophy Cannot tell cause in others, may be from non reproduction of new muscular fibres, to excite this should introduce a Galvanic Pessary.

3. Pathological Alterations & changes:-

May be none. If any it may vary 1st In Quantity:-

a. Diminished - In from inflammatory

changes, or from clots &c. If mechanical - wash out Uterus. If Inflammatory - use Antiphlogistics & Increased - Administer by full doses of Ergot, hot uterine douches, Astringents. Opium. Cinnamon & Brandy 2nd Stage - Should be fluids. If clothy should let patient sit up to assist their discharge. But watch for faintness & if it comes on Antiseptic Injections

II Urinary Bladder State -
Watch for cause.
If Retention - Hot Sponges, Catheter as a last resource Disinfect it first
Incontinence:- Irritation of Urethra or Wall, or Sphincters to cause it. Spinous Belladonna &c
If chronic Diseases of Puerperium

I Milk Fever

Comes on about 3rd or day. If no great importance. Marked symptoms distension & pain of breasts.
Treatment:- Empty breasts. If ointments of hot water, vinegar. &c Belladonna

Blisters. Immune to. If Woman dont if nurse.
If nurse, child is best cure.
If any use breast pumps & cups

II Ephemeral Fever

First Rigors. Allied to Ague. Diminution of bodily & secretions. Excess in perspiration. If shivering - look at Mamma for often it is from Abscesses or Abscesses
Treatment:— Hot drinks, Ferments. Diffusible stimulants. Quinine.
Open Abscesses if any.

III Milliary Fever

Rare here. If ever the Peculiarity of it is the small pin point blisters

IV Typhoid Fevers

Puerperal woman if not exposed to them in childhood, if exposed in last days of Puerperium they are apt to run a very malignant & fatal course. They are prone

as Scarlatina, Simple Fever, Typhus, & Typhoid Fevers

Puerperal Fever is used for all the fevers to which a woman in lying-in is subject, all fevers as above. But apt to be very fatal. often hard to trace infection as Scarlet Fever which is very common in Puerpera
Thus temperature & pulse high in a woman in premature labour, with fever & rash would often be said to be Puerperal Fever whereas it is Scarlet Fever which is often a cause of Premature labour.
It is often overlooked though its often proving fatal before characteristic symptoms appear.
What holds good of Scarlatina does so of all other Fevers in lying in Women.
But Scarlatina is the commonest Fever in lying-in Women.
Often Typhoid Fever from patient being in an ill ventilated room &c

V Rheumatic Fever

Rather common soon after Labour. Apt to be Heart Affections & Joint Affections Treat

Thesis as in other Rheumatic Cases.

Lecture 80 March 28th 1878

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Table showing the relative frequency with which organs were found to have undergone recent inflamatory lesions in 19 cases of Surgical Fever resulting from operations or injuries of the Pelvic Organs including 3 cases of Hæmatoma.

Seat of Lesion	No. of Cases	Percentage
Peritoneum	12	63.1
Lungs & Pleura	12	63.1
Seat of Wound	5	26.3
Cellular tissue around the Kidneys	5	26.3
Intestinal Canal	3	15.8
Bladder	3	15.8
Liver	3	15.8
Veins	2	10.5
Spleen	2	10.5
Vagina	1	5.3
Uterus	1	5.3
Synovial	1	5.3
Parotid Gland	1	5.3

Puerperal Mania

1. During Pregnancy
2. During Labour
3. During Puerperal Period
4. During Lactation

Causes :-

1. Hereditary disposition
2. Anaemia & Exhaustion
3. Peculiar state of Sexual System which exists after labour
4. Eczema
5. Past deliveries
6. Mental emotions
7. Symptomatic of Inflamatory Processes

Symptoms & Diagnosis

Progress

Treatment

A. During attack

1. Quiet nervous excitement - Camphor Opium - Chloroform - Bath
2. Quiet vascular excitement - Digitalis - Aconite
3. Remote excretion of waste substances

B. After disease is established

1 Stricture
2 Obstruction
3 Occlusion
4 Restoration of function.

Phlegmasia Alba

Synonymes :- Phlegmasia alba - dolens - Oedema lacteum - White leg - Crural Phlebitis

Pathological Causes

Seat

Supposed to arise

1. Retention of Lochia
2. Metastasis of Milk
3. Rupture of lymphatic vessels at seat of Ulcers.
4. Obstruction of lymphatic vessels & glands.
5. Inflammation of these
6. Phlebitis
7. Affections of Veins & Nerves
8. Inflammation of Cellular Tissue

Q. Inflammation of all the tissues
IV Result of a blood disease

Symptoms & Diagnosis

1. Primary symptoms
2. Wavering Fever
3. Pain
4. Loss of Motor Power

Results

1 May resolve
2 May form abscess
3 Cause death
   a. Gangrene
   b. Embolic Pehsorhæmia
4. Cause Lameness
5. Cause Elephantiasis
6. Recurrent or Chronic Rheumatism

Treatment:—

Prophylaxis

Constitutional

1. To depurate blood
2. To subdue Fever
3 To keep up strength
4 To relieve pain

B. Local Measures

1. Position of limb
2. Application of Counter irritants
3. Promote absorptions
4. Restore powers of limb

* 8/4

VI Septic Fever

This is real Puerperal Fever It is of same kind as Surgical Fever.

Cause :- Absorption of septic matter through the wounds of placenta or other lacerated parts. When decidual membrane is pecled off deeply it exposes a large lymphatic surface which may absorb the poison. Primipara are especially liable to absorption of this poison whatever it may be.

Sources :-

1 May be from within individual herself This is rarest form. 2 May be some cancer or affection as of cervix which supplies the septic matter. 3 May have a sedrous

labour, followed by sloughing or laceration
& poison supplied by decomposing pus
blood clots &c & absorbed through wounds.
But this is very rare, for generally before
decomposition of her own excretions can
take place the wounds have become non-
absorbent. But a wound might be made
after as by finger nail, syringe &c
2. Infected from without:- We may carry
about poison with us & be patient,
as from post mortem examinations, & it is
morally criminal to go to a lying in woman
after such a dissection. We should care-
fully disinfect our hands & clothes.
The danger was shown me a friend where
an enormous number of lying in women
died of fever from being attended by students
just fresh from dissecting.
Or from dressing a sloughing wound in
labour, in cases of Ca uteri.
Or from examining a woman with
decomposing foetid vaginal discharge, it
does not poison her because she has no
wound
Or from sloughing fibroids or from an-

that Puerperal Fever be case.
must be very careful to disinfect properly.
Carried in:- fingers, instruments, sponges
bedclothes, clothes, air (?)
Method of Poisons:- Burdon Sanderson shows
that bacteria are always
present though not the poisons themselves.
Hence it is not a Specific fever as Scarlet
Fever, Small Pox, Typhus & Typhoid &c
& a series of such cases showing number
& seat of lesions see previous Table
& there is also another Table of Surgical
Cases with Fever with which the Puer-
peral cases may be contrasted
Results of Poisoning:-
1 Local:- Inflammations in canal, or
cellulitis in Pelvis, affections of lymphatics &-
osphorites, phlebitis & Pyæmia as secondary
affections at a distant day
2 by general:- 3 Groups
a. Septicæmia:- Poisons in large amount
& quicker decomposition with
vomiting, diarrhœa, failure of heart's
action & nervous exhaustion & death in
2 or 3 days. Thus a very rapid course

Not much local change. Whole blood is poisoned

b. Chronic :- Acute, degenerating of abdominal glands, muscles, peritonitis. Spreads up lymphatics & they are filled with pus like matter. Blood less acutely poisoned, & more time for local manifestations

b. Pyemia :- Marked thrombosis & phlebitis. Spreads by veins. Thrombi sometimes double & break up & cause secondary embolisms.

Symptoms & Diagnosis :- Sometimes no local manifestations at first. Differs according to form of poisoning. Generally a rise temperature & pulse. If rise & fall in morning make an examination, & you find great lymphangitis, disturbance & arrest of secretions, respiration & general functions.

Prognosis :- Always doubtful. More favourable if local

Treatment :-

A. Prophylactic :- Germans use constant irrigation.

To prevent wind your hands, clothes, any wound. Attend to any fatid discharges

by syringing out vagina & uterus itself.
If localized employ disinfectants of Genital Canal & antiseptic dressing as Salycylic Acid & carbolic Acid &c
℞. to relieve:— Sedatives. 5-10 mins. of Turpentine for meteorismus.
Poultices. Chloral.
To restore excitement:— Sedatives & Opiates
To counteract effects of poison:— large doses of Quinine, Salicylate of Soda, & of Iron.
Stimulants — Brandy Champagne &c

Puerperal Mania

Should be called Insanity. More frequent before Chloroform. often during 2nd stage of Labour from pain
But we refer to that during Puerperium.
Its period — varies but towards end of 1st week most frequently, may be 1st day or during lactation
Causes:— See Table
Predisposing cause is worth

Sir J. Simpson believed Albuminuria was associated with it.

Commonest in first labours

Mental shocks as death of child &c

Often from Inflammatory Affections

Symptoms & Diagnosis :- During pregnancy it is generally "melancholia" & may be to during Puerperium, but it is most frequently Maniacal.

Sleeplessness should put you on the watch for mania may develope. May get restless & delusive, want to get up, go through window, &c & mania gradually developed

Prognosis :- May go off in a week or two or not till Menstruation may be.

A few become permanently insane about 8 Percent in Throningsde. Often goes on to a fatal issue from exhaustion, but this is not a rare issue

Treatment :- Opiates & Chloroform carefully should be given at first & in large doses. Digitalis & Camphor for nervous excitement.

Give good nourishment & if she refuses it give it as injections &c.

Rest of treatment see tables

Attendance :- Let her go Asylum if possible
If not let her be well looked
after at her own home & carefully attended

Seclusion :- Let her be kept quiet & not
teased & troubled as by children
&c

Restoration of function :- As by Forces as
Iron, fresh air & careful dieting.

Lecture 81 March 29th 1878

Phlegmasia Alba
Rheumatic Solens. White leg
1 in 6 or 7 cases
Both limbs but more rarely in one
Associated to retention of lochial discharge
to metastasis of milk
to rupture of lymphatic vessels
at brim of pelvis
to inflammation of lymphatics
to obstruction

Davis first pointed out its connection with the veins.
Inflamation of Cellular Tissues &c.
Blood in veins may be coagulated in large & small veins of leg.
May be coagulation of lymphatics.
If blood poisoned with lactic acid it coagulates where ever blood flow is slowed or obstructed & in puerperal woman it is a condition specially favourable to this & especially if great escape of blood during labour.
Why in legs? :- From varicosities of lower limbs from pressure on pelvis & more marked in left than right from left Iliac Vein being crossed by Artery & by Colon. Also heart weakened. Also in labour child's head is pressed on left side but this has not much influence.
Changes only occur some 16 days subsequently
Symptoms :- Pain, swelling in limbs, first below thigh & generally below ankles & spreads up. Skin gets distended white & clear, or may be mottled. Will hardly put on pressure. Intense pain mostly in calf of limb hence name of P. Dolens

Loss of power

Results :— 1 It may resolve

2 It may go on to form abscesses & may prove fatal from Gangrene, Pyæmia

3 It may leave patient lame

4 Leg may remain thick & brawny like Elephantiasis

Treatment :— Prophylactic.

Restore Blood. Attend to Bowels

Rest. Keep down fever Alkalines

Quinine & Iron.

Sedatives & Opiates. Raise the limb & apply sedatives as lotions. Cotton wool to limb to keep up steady warmth

Beware of using counter irritants

To restore power :— Stimulating liniments

Friction, galvanism

Must not get up too soon

Peripheral Arteritis, Thrombosis

Coagulation of blood in Pulmonary Arteries or in Heart or large blood vessels may be sudden death without any

warning. Breathlessness is marked symptom.
Sometimes rallies, but rarely generally
fatal.
Stimulants Opiates
They may also occur in systemic arteries
May be of mesperal Endocarditis, vegetations
form, breaks off, flow away & produce
infarcts elsewhere, if get to Brain
cause Apoplexy & sudden death

Lectures on Diseases of Women

By Professor Simpson

Lecture 1. Nov. 16th 1877

*1 Uterine Inflammation

1 Peritoneum - Pelvic Peritonitis - Parametritis

1 Seat

2 Stages

a. Result

b. Appearance

c. Suppuration

d. Pustulous formations

3 Complications

2 Pelvic Cellulitis - Parametritis

Pelvic Cellulitis - Parametritis - Pelvic Abscess

1 Seat

2 Stages & Result.

a. Exudation b. Suppuration

c. Roughing of Cellular Tissue

d. Pustulous formation

3 Complications

4 Etiology

1st. Abortion 2nd Parturition

3rd Imprudence during Menstruation

4th Inflammation of Uterus & Ovaries

5th Gonorrhea 6th Pubic vile or Cancer

7th Traumatic

5. Symptoms
   a. Pain b. Local Pain c. Fever
   d. Menstrual disturbance of Pelvic Organs
   e. Sympathetic vomiting
6. Physical Diagnosis
   a. Swelling
   b. Fluctuation on formation of Pus
   c. Use of exploring needle
7. Differential diagnosis between Cellulitis & Peritonitis and from
   a. Hematoma
   b. Cancer
   c. Fibroid tumour
   d. Ovarian tumour
   e. Displacement of Uterus
8. Prognosis *

Pelvic Peritonitis

It affects not only Peritoneum but all the pelvic organs, or any part of their serous membranes, but in some cases it may be localized. It is an inflamation affecting Serous Membranes.

Seat - May be localized or affecting all serous membranes of Pelvic cavity.

Stages - (a.) Hyperaemia - surface rough, epithelium clouded & greater vascularity. Effusion of

Symptoms - Quantity of coagulable lymph poured out into pelvic space & mostly into space of Douglas & posterior part of Pelvis. We get a covering in of Pelvis from adhesion of Sigmoid Flexure. Bladder & Pelvic Organs & thus a sac is formed & lymph thus cannot spread up to Peritoneum of abdomen. Symptoms effused may constitute may be in a few hours or some days, then it feels as if a mass of Plaster of Paris had been poured into Pelvis & its contents feel like a solid mass. May remain for some time, but gets gradually absorbed. In some cases Lymph organises & forms Pelvic Adhesions. At other times there is perfect mobility. But the Lymph may break down & pass into Pus

(b.) Suppuration - Abscess & pus may be felt & opened through Post. wall of Vagina per Rectum. Thus often fistulæ are formed

Complications - Usually associated with other pelvic organs & from inflamatory processes

B. Pelvic Cellulitis - Parametritis &c.

Seat - Is cellular tissue surrounding & forming upper between pelvic organs & containing Pelvic Arteries.

Known to & spoken of by our oldest authors. Dr Hardy was the 1st Englishman who wrote about it

Phlegmon, Abscess are improper names.

Parametritis is scarcely applicable, for it is not confined to

Pelvis cellular tissue alone. Inflammation may be only of one side of Pelvis

Stages - (a) Effusion, lymph may form a solid mass. Inflam. abscess may then subside & lymph may be absorbed. Or it may pass on to

b Suppuration, then pus sac or abscess may rise up above Poupart's ligament or even up towards umbilicus, stripping up Peritoneum. Abscess may form fistulous tracks in different directions, as through Abdominal Walls Rectum, Sigmoid flexure of Colon (pus then escaping into gut), Vagina, Uterus, more frequently & in a considerable number of cases into Bladder, also into Urethra, through Perineum, through Obturator Foramen & thence through pelvic wall, or through Sacro-sciatic notch & escapes on back of thigh, & fortunately but rarely into Peritoneal Cavity

Results most favourable when abscess opens through abdominal walls.
least favourable " " " into Peritoneal Cavity

Complications - When both A & P occur together.

Etiology - Under what conditions do these diseases occur?

1st. After Abortion 2nd. After Labour especially if it has been instrumental. Bernard says out of 99 cases 43 came on after abortion. Allen says that out of 43 post mortem cases 38 presented evidences of having had children & 5 were Nulliparae

3rd. Intemperance during Menstruation as using Speculum, improper action, cold, mental emotions. 4th. etc. may result from inj.

Inflammation spreading from other organs as a Secondary Inflammation
5th After Gonorrhoeal Attacks - Bernards 99 cases had 28
from this cause. Out of 93 cases at a Paris Hospital 28 cases
recorded as connected w Gonorrhoea. Hence Pelvic Inflammation
in female seems to correspond to Orchitis in male & their time
of coming on after gonorrhoeal attacks also corresponds
6th Tubercles - often cause Pelvic Peritonitis. This fact is useful
in diagnosing a case which may be masked by exudation
Cancer - also often causes it from corroding through pelvic parts
& depositing cancerous matter there.
7th Traumatic Causes - As from use of Sound. Blows. Falls
with Douches. Syringing. Injection of fluid into Uterus. From
Rupture of Ovarian Cyst into Peritoneal Cavity.

Lecture 2 Nov. 23rd 1877

*2

A Treatment

A. Before suppuration is begun
1 Antiphlogistic
2 Anodynes
3 External Applications
4 Regulation of Bowels

B. After suppuration is established
1 Poultices & Refrigerants
2 Evacuation of Abscess

3 Counter irritation
4 Counter openings
5 Fomes
6 Obstructions * 2

Pelvic Cellulitis (Continued)

5 Symptoms - 1 Rigors Chill shivering at first & when chronic
2 Local Pain varying according to intensity of inflammation & patients constitution. Sometimes intense throbbing pain at seat of inflamatory process. 3 Fever, hyperexia may be insidious. Most in puerperal cases worst & requires most watching for it comes on insidiously. 4 Functional disturbance of Pelvic organs from deposits &c as great want & inability to pass water, obstruction if bowels &c. 5 Inflammatory Vomiting

6 Physical Diagnosis - 1 Swelling. If an aggravated one puerperal. Finger in Vagina feels the deposited mass most frequently on Post. Fornix as a firm hard tumour. 2 Inclination on formation of pus at a later stage, most at point where pus is tending to make its exit. 3 Use of exploring needle tells us the nature of the deposit

7 Differential Diagnosis between Cellulitis & Parametritis
Very difficult to Parametritis, swelling is more frequently in the middle line & P. is carried on over back In Cellulitis, swelling is more to one side

a lateral. & P often lies with limb of affected side drawn up. If limbs are drawn up in P ormelitis both are so.
In P ormelitis - all the organs are fixed in a mass
In Cellulitis - all the organs are only fixed on one side
1 P from Haematoma - Blood effusion. By history etc. rigors & pain & inflammatory symptoms being developed afterwards. Also is soft & exploring needle tells us its nature
2 P from Cancerous Affection - Cancers &c in Cervix & Body of Uterus &c
3 P tumours - More difficult. Fixed immovable P and, but suffering & interference with organs come on gradually & keeps going worse. Also is not so sensitive on internal & external examination
4 Ovarian Tumours - Use exploring needle
5 Displacement of Uterus - Careful examination & use of sound tells us its direction
P Prognosis - Rarely fatal 2 out of 3/2. Complications from inflammation or fixation of uterus or forcing it from its position may cause Amenorrhoea Dysmenorrhoea Sterility. Interference with circulation may cause atrophy of uterus & ovaries &c. Abscess may form & drain away her health & strength & may subsequently succumb to some other disease thus brought on. Sometimes death from abscess bursting into P cavity.

Causes & causing Peritonitis

Treatment - A. before suppuration

1 Antiphlogistic - Leeches, have given relief, but Simpson seldom used them. Bleeding not now used 2 Anodynes Rest Acute Opiates for pain French give large doses of Salines

3 External Application - Pain relieved as by poultices of bread &c. Suppurative stages use abdominal, Vesicants best at a later stage as if by blisters (signs of Peritoneal Inflam. show, but aggravates in Cellulitis by causing Strangury)

4 Regulate Bowels - Feed on milk beef tea, Keep them moderately at rest. Empty bowels at first by Enema & then keep them at rest for some days in acute attacks

B after suppuration

1 Abscesses & Aspirants - See Immune &c

2 Evacuation of Abscess - Allow abscess to suppurate before evacuation & then inflammatory process is shortened & does not spread. If no pointing by poultices & warm & moist applications. Evacuate it if possible into Vaginal Canal if not into Rectum Use a lancetting knife & then probe in the finger

3 Counter irritation as from Iodine

4 Counter openings if none & anything suspected & inject iodine

5 Drains - for constitutional as usual &c.

Lecture 3 28th Nov. 3 p.m. 1877

*3

Inflammation of the Ovary = Oophoritis

Pathological Varieties

1 Parenchymatous inflammation

2 Interstitial inflammation

Consequences

Clinical Varieties

1 Acute

2 Chronic

Symptoms

1 General - Pyrexia

2 Local

(a) Pain

(b) Hardship

(c) Menorrhagia

(d) Leucorrhoea

Physical Diagnosis

1 External Palpation

2 Internal examination

3 Illness continued

Prognosis

Treatment

1 Of Acute Oophoritis

2 Of Chronic Oophoritis

Inflammation of Fallopian Tubes = Salpingitis

Seats

I Serous covering = Peri salpingitis

II The mucous Membrane = Endo - salpingitis

Pathological Varieties of II

1. Catarrhal

(a) Acute

(b) Chronic.

2. Suppurative

Modes of discharge of Purulent Matter

1. into Peritoneum

2. between Layers of broad ligament

3. into Uterus

4. into bladder

5. into intestinal canal

3. Phlegmonic

Etiology

Puerperal

Menstrual

Traumatic

Secondary to Metritis &

Influence of Age

Consequences

Symptoms & Diagnosis

Treatment.

*3

Oophoritis

Hyperaemia at period of ovulation at period of menstruation
Under some circumstances this may pass into inflammation
There are two forms 1. affecting the parenchymatous tissue
in different degrees (if ovary) May be of only young
follicles they becoming cloudy & swelling like what occurs
in only one follicle of ovary at ovulation, but this may
subside & recovery take place. When more extensive the
follicles may break down & their fluid contents then becomes
pus thus follicles form small abscesses & ovary is destroyed
Or 2 Interstitial or affecting the stroma of ovary & ex-
tending to periphery of organ. Whatever way cells epithelium
of follicles made fluid corpus from follicles of serous nature,
mucus, pus. corpus luteum increased in number but decreased
in size. Outer walls of follicles also take part in the
inflammation. Abscesses form not in the follicles, but
in stroma (if acute) but if chronic, connect. tissue
becomes dense & hard in a sort of cicatrix from centre
also of stroma & thus bursting of abscess at next
menstrual period is prevented

Symptoms Acute - from Excessive cold - cold - injury
gonorrhoea, Scarlatina, Labour, metastatic poisoning &c

Chronic - Whatever tends to congestion & stagnation

Symptoms - 1 General - Pyrexia increasing &c
1 Local - (a) Pain in back & in

one or other way of a throbbing & in chronic cases pain is aggravated during menstruation, but relieved after
If pain be intermenstrual see if any change in ovary
(b) Sterility - from inflammatory destruction of follicles & the atrophy of ovary. Or may be from adhesions to neighbouring parts preventing ovula passing into Fallopian tubes
(c) Menorrhagia - often occurs with chronic inflammation & is general due to some endometritis
(d) Leucorrhoea - Between menstrual periods

Physical Diagnosis

1 Ext. Palpation - elicits seat of pain by pressure on abdomen, but not always able feel ovary
2 Int. Exam - can then easily feel ovary & can then tell its size, state &c
3 Combined Exam. Is most efficient for ascertaining the exact seat of pain & size of ovary & its state as enlarged atrophied, movable fixed &c.

Prognosis - According to state of P's constitution. Only danger in acute cases from danger of adhesions may twist as into peritonitis &c

Treatment - Just as in other Pelvic Inflammations. Rest Sedatives aspects. Ext. Pyromide Counter irritants Always be cautious in your

progress till one or two menstrual periods have elapsed from their hyperæmic state being so liable to light up the inflamatory [illegible] again. Hence after cure the Pt must take the greatest care at next menses, for how it occurs & becomes chronic.

If Chronic - If great congestion at menses apply leeches to cervix. After menstruation two or three Hyp bleeders, & strong counter irritants - Rest. Bromide of Potassium, mineral waters

Salpingitis

Seats 2 Is either internal or internal coat or of Tubes & Mucous Membrane. Inflammation of tubes is Oviosalpingitis.

Ovariosalpingitis seldom occurs alone but along with other pelvic inflammation & so only specially noticeable from the facts of its adhering to parts & it gets thus constricted & useless.

If Inflam. of Mucous Coat = Catarrhal salpingitis

3 Pt mets occ: Catarrhal, Suppurative Diphtheritic

1 Catarrhal - Whole tube swollen & hyperæmic elongated. Mucous Membr - reddened vascular & softened & pours out quantities of mucous If it becomes chronic, mucous membr. becomes greyish great flow of mucous secretion goes on.

2 Suppurative - When inflammation goes on further and of tube is blocked up & abscess forms in tube called Tubal Abscess & may become very large. It may burst into 1st. Peritoneum & cause Peritonitis, 2nd. into broad ligament 3rd. into uterus & into bladder 4th. into intestinal canal

3 Diphtheritic - Occurs in Puerperal Fever & occurs as patches in tube. Occurs sometimes during menstruation as from instrumental interference. Or in cases of Diphtheritis It may be secondary to Metritis & gen. occurs between ages of 35 to 45

Consequences - Malformation, Obstruction resulting dilatation of canal & pressure on ovula passing through them.

Diagnosis. Combined Internal & External Examination Exploring needle. Discharges that come away. Often difficult to diagnose. Examine for cells in discharge but not much good. Probing sound into Fallopian tube can rarely be done & then it is as likely to go through uterus as into tubes.

Lecture 1x December 4th 1894

**

Inflammation of the Uterus = Metritis

Seats

1 Serous covering = Perimetritis
2 Middle coat = Uterine metritis = parenchymatous metritis
3 Mucous lining = Endometritis

Parenchymatous Metritis

Pathological Varieties

1 d Simple (e softening
2 " (e induration
3 Suppurative

Clinical Varieties

a. Acute
b. Chronic

Endometritis

Seats

1 In body = Endometritis
2 In Cervix = Endocervicitis

Greater frequency of Endocervicitis because

1st more direct & readier infection
2 more accessible to injury & disease of neighbourd

3rd. more exposed to injury during labour

4th. Is channel for escape for uterine secretions

Pathological Varieties

1 Catarrhal

2 Diphtheritic

3 Exfoliative & Hemorrhagic

Clinical varieties of Catarrhal

1 Acute

(a) In body (b) In Cervix

2 Chronic

(a) In body (b) In Cervix

Results - Local & Functional

(a) Uterine intermenstrual secretions

b Menstrual hemorrhage increased

c " escapes & foams

d " exfoliation of mucosa

e Conception less or Ammenorrhœa

f Passage of Spermatozoa hindered

g Ovum not implanted

h " implanted imperfectly

i " early separated

k General health impaired

Etiology - Predisposing Causes

1 Constitutional conditions 2 Puerperal state

3 Menstrual conditions.

Exciting Causes

1 Affecting whole system - (a) Chills (b) Poisons (c) Exanthemata

(d.) Cardiac diseases

2 Acting Locally - (a) Traumatic (b.) Secondary

(c) Irritative (d.) Congestive

Parenchymatous Metritis

may affect both Body & Cervix Uteri.
In some cases there may be only Inmefaction of wall of uterus. But more genl. there is both Inmefaction & Inflammation. Hyperplasia occurring & loss of muscular constituents of walls tube. is replaced by fibrous & connective tissue & hence uterus has somewhat lost its contractile power. may be abscess occassionally

Clinical Varieties

1 Acute - Great Inmefaction but no change in walls of uterus

2 Chronic - Has Inmefaction & changes in middle muscular wall & other tunics get secondarily affected

Endometritis

Seats - 1 Body 2 Cervix 3 Endo metritis & Endo cervicitis, the last is far most common from the 4 causes stated in Table before.

Less common in virgins than in married women

Pathological Endometritis

1 Catarrhal - Occurs frequently & may pass in to Phlebitic form

2 Hyperplastic & Hemorrhagic - An unusual period hemorrhage occurs in wall of uterus & then

This desquamates like a decidua only much thicker & is then thrown off. It may be 2 or 3 layers at one menstrual period

Cut surface

Acute - Softening of mucous lining of Uterus & hyperaesthesia. Free secretion of fluid, in body of Uterus clear mucous like white of an egg, but it gets more viscid & when degeneration of epithelium at gets lodged from degenerated epithelial cells & thrown off follicles & ultimately it may become purulent.

Fluid from Cervix is from first extremely bought & viscid & it closes up follicles

Chronic - Mucus Membr. of uterus remains hurgid but is not so vascular as in Acute. Surface stained & irregular from granulations on it. Cervix follicles enlarge dilate & swollen. Papillae become hypertrophied & more vascular so as to resemble strawberry Fluid from cervix may be tinged w blood.

Erosions or deeper ulcerations may hence occur as in old women mouths of follicles get occluded sometimes atrophy & at other times hypertrophy of uterine mucous membr. & hence causes infertility. Cavity of uterus may be dilated into a wide sac & walls instead of together are wide apart. In menses amount of blood is much increased & with great

Pain &c <u>But see table for results</u>

<u>Predisposing Causes</u>

1 <u>Constitutional Causes</u> - Strophulous & Syphilitic

2 <u>Puerperal conditions</u> - as after labour during alterations of uterus in involution.

3 <u>Abnormal conditions</u> - which is allied to an inflamatory state of a catarrhal form, but the organs have exciting cause to stir up the proper inflamatory state

<u>Exciting Causes</u> <u>In general</u>

a Abs may be a <u>chill</u>

b If from an <u>exanthema</u> abs may be accompanied even by mucous & an actual bleeding

c Also from <u>fevers</u>

d Abs may be from <u>cardiac diseases</u>

<u>Local</u>

a. <u>Traumatic</u> - Found - pregnancy & attempting to procure abortion - accepted criteria to

b. <u>Secondary</u> - from surrounding inflamation

c. <u>Septic</u> - particularly when any wound

d. <u>Irritative</u> - As from fibroid tumors in the uterus which may excite the membrane of uterus & it exudes mucous & may be blood

e <u>Congestive</u> - from some obstruction to circulation - as from displacements of uterus & thickening of the most troublesome forms of catarrh.

*5 Symptoms (of Endometritis)

Constitutional

Minor symptoms of pregnancy

Symptoms - General - Local

Leucorrhoea

Menorrhagia

Dysmenorrhoea

Pressure symptoms

Diagnosis

Touch - Speculum - Sound - Test - Syringe

Prognosis

Treatment

Constitutional

1. Local to Uterus - Counter irritants Ossaries

2. Application to Cervical Canal - by speculum
Rod covered with cotton
Pencils
Nit. Potassae (Ag NO$_3$) Chromic Acid
Nitric Acid . Nit. Potassi Fusa Arrows
Chlorate of Potash

3. Scraping if uterus if uterus

*5

Local Symptoms - Leucorrhoea - If inflam. of interior of uterus mucous is more apt to be bloody than if from cervix

Menorrhagia frequent

Dysmenorrhoea great pain at menses

Pressure on neighboring organs

Diagnosis.

By digital examination. Touch as vagina as walls more moist. Cervix lower & softer. Os uteri more patulous. Lips indurated General hypertrophy

Sound - If endometritis probe as pain as it passing through cervix and fill it reveals body of uterus

Speculum - Shows as kind & source of discharge

Test - To dilate canal & to see state of uterine mucous membr

Syringe - Will wash out the discharge & thus you can see its nature.

Lectures 5 & 6 are to be found at Pages 76 - 84 & from 84 - 93 respectively, having been omitted from their proper places.

Lecture 10 Janʸ. 31ˢᵗ 1878

*11

Neoplasms of Uterine Organs

I Solid Tumours

1 Simple

a Uterine Tumours

Fibromatous "

2 Malignant

Sarcoma

Epithelioma

Encephaloid Cancer

Colloid

II Cystic Tumours

1 Hydrops folliculorum

2 Ovarian Cysts

3 Cystoma

Pathological Anatomy

Contents of Cysts

Contiguity

Colour

Composition

Microscopical & chemical

Mode of development

1st By papillary proliferation

2nd By glandular "

Etiology

Symptoms

1st - Local - Functional derangement

2nd - General - Constitutional disturbance

Physical Diagnosis

A - When in Pelvis

1st - Situation

2nd - Form

3rd - Mobility

4th - Sensibility

B - When abdominal

1st - Position

2nd - Form

3rd - Consistence

Differential diagnosis from

1. Retroverted Uterus

2. Gravid uterus

3. Fibroid tumour of uterus

a. Difference in position

b. " " form

c " " consistence

d " " vascularity

e " " connection with uterus

f " " influence on size of uterus

4. Ovaries

a Inspection of form & vascularity of abdomen

b Palpation
c Percussion
d Combined internal & external exploration
e Microscopical & chemical examination of fluid

5. Ovarian Pregnancy
6. Tumours of Uterus

Cyst tumours in Broad ligament & Fallopian tubes

7. Hydronephrosis
8. Floating Kidney
9. Tumours of the Liver
10. Enlarged Spleen
11. Fecal collection
12. Hydrocele
13. Ulcerated bladder

Treatment

A Medical

1 Keep up standard of health
2 Alleviate symptoms of pressure &c
3 Subdue local inflammation

B. Surgical

1 Application of pressure
2 Paracentesis
3 Forming a ~~tumour~~ communication between interior of cyst & cavity of peritoneum

4 Establishing a fistulous communication between interior of cyst & cutaneous or mucous surface
5 Injection of Iodine
6 Evacuation

The story of operation

Contra indications

Modes of performing the operation

1 Preliminary measures

Diet & Regimen - Toilet

2 Instruments required

3 Position of patient

4 The operation

(a.) The incision

(b.) Evacuation of one or more cysts

(c.) Separation of adhesions

(d.) Extraction of Tumour

* 11.

Neoplasms of Glandular Organs.

Mammary Tumours - Non striped muscular fibre. Free from walls of vessels & movable. Rarely attached to ovary. Hard firm consistence. Rarely give cause to operation. Tend to enlarge only slowly.

Ischuria - Rare, rarely larger than a child's head. Rare affection of ovary. If so it is best to perform ovariotomy. Pain of sciatic and lumbar

Colloid Tumour - Often great pain

Is now considered to be only the

regional form of Cystoma

Cystic Tumours - Most common tumour of ovary from its being cystic like tendency.

1st. Hydrops Follicularum is a simple dropsy of the Graafian follicles of ovary. It may be at any age & of one or more follicles. Some have considered the result of inflamation, others as resulting from disintegration of corpus luteum Not important. But can feel the enlarged ovaries. Use the exploring needle

2nd Dermoid Cysts. Ovary enlarged, but one large cyst with hair bulbs, & glands, & may be teeth, bones, nerves, muscles, &c, walls of which to mistake character by using needle, fluid is yellowish. Probably congenital. Ovariotomy

3rd Cystoma - Common Ovarian Tumour. It may effect one or both ovaries. It may occur at any age but gen. during functional activity. Form large masses. It may be one great cyst. Classified as Unilocular, Multilocular &c

Sac cyst always pedunculated & tends to grow upwards & forwards & thus of importance in tapping. Ovary itself remains normal in structure. It is covered over with epith. cells but these dont go all over the ovary but only upto its front or upper & anterior part of it, rest is covered by endothelium. Adhesions may occur
Under epithel layer is fibrous layer to grow by desquamation & multiplication of the cells, their walls thin & burst into each other. Contents vary. If cysts be small vessel & gelatinous, if larger more fluid & if one large cyst it is thinned.
Microscopic - Fragments of cells, colloid matter, fibroid cells cholesterin & blood pigment. Few leucocytes at first tapping
Chemical - Water, Proteid matter, Ashes, Fat & Cholesterin
Only in Ovarian cysts do we get Pseudo albumen
Development - By proliferation of papillae which first out into the interior grow towards each other & thus form partitions & then cysts & so on Secondly By a proliferation of glandular structure
Diagnosis - Touch in the dark
Anatomical derangement - Sterility & in C. Interference with bladder & bowels sometimes
Termination & Treatment - Generally after tumour has got large & extended up into abdomen.

Prognosis - Only by direct feel.

When it clinics - Rarely found at this stage. Uterus is free & tumour attached to it only is free It is also often very painful more so than fibroids

When in abdomen - In front & rather at one side Rounded in form. On feel its elastic soft fluctuating fluid feel which varies its vascular print heard

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The preceding Lecture 10. for Jan. 21st should come in after Lecture 9 for Jan. 25th & leaves end, or at Page 43 for it is misplaced

Lectures 5 & 6 are to be found at Pages 46 & 84 respectively having been omitted from their proper position in the Series.

Lecture 4. Jany. 11th 1898

* 8

Prolapsus Uteri (Continued from Page

Varieties - 1 Descent of whole organ
2 Descent of vaginal portion with elongation of cervix

Degrees - A Incomplete
1 Uterine axes unaltered
2 Body turned to sacrum & cervix at vulva

B. Complete
Escaped from V. ogina

Symptoms
a Sensations of dragging & weight in pelvis
b Pains in back & loins
c Rectal & Vesical Irritations
d Menorrhagia
e Leucorrhoea
f Impairment of Ut. altering powers
g Inability to left weights

Physical Diagnosis

Prognosis

Treatment - 1 Reduction
2 Retention

a General medical treatment

b Palliative cure

1 When perineum intact

Vaginal pessaries of Sponge, Wood, Ivory

2 When vagina cannot retain then needs mechanical support

c Radical Cure

1 Ventrofixation

2 Colporrhaphy

3 Colpo-perineorraphy

4 Colpotomy

5 Amputation of Cervix

Anteversio Uteri

Normal inclination of the uterus to pubis

Causes

Parallel to those inducing retroversion & flexion

Mean age at which uterus appeared

In Straight at 16.3

In Flexed at 13.2

In Verted at 14.9

Complications

Incontinence

Tumours

Symptoms

Uterus always
Dysmenorrhoea
Sterility

In 23 married women with anteflexion.
4 never had conceived 4 had conceived

Diagnosis
Symptoms
Sound
Treatment
Rest
Position
Removal of complications
Retraction of the Uterus
Retention

* 8

Prolapsus Uteri

Varieties - It may be of organ or may be of Vaginal portion with elongation of cervix
There is one kind which is no prolapsus at all but simply a hypertrophic elongation of the Vaginal part of cervix which is also much hypertrophied
Degrees - It may be complete or incomplete according

as stated in table

Symptoms - Are such as given in the table

Physical Diagnosis - Very easy. Tumour between legs. Trace up the tumour & prove that it is the uterus

Prognosis - Not dangerous, but troublesome

Treatment - Reduction - Push back the front wall of the vagina over tumour, then push back the fundus & then return cervix. Some cases return themselves on patient's lying down. Other cases in which. Inflammation & inflammation has occurred, it is dangerous to return from bearing adhesions & precautions must be taken before it attempted. Other cases cannot be reduced

But most cases are easy of reduction

Always find the os Uteri & prove it is it by passing in a probe

Retention - Following accomplished reduction how are we to retain uterus Complete rest, warm water & after astringent injections [illegible] of glycerined wool, remain in bed as long as possible. When patient gets up employ some kind of pessary

When pessaries is intact - Use some form of pessary Sponge should only be worn 24 hrs well

not change. Others are made of wood, metals, ivory
hair & tape to be covered with gum elastic. India
rubber soon gives rise to irritation & must only
be used temporarily. Gutta percha also does the
same only in a less degree, the best kind is sold
in thick rods & candle is best. Cahoun is the
best & cheapest pessary as a plug for the pool.
Pessaries are of various shapes - Ball - Ring & hemi
Gariel's Pessary is an indiarubber bag which can
be distended with air but is not good.
A good one is one with a stem supporting a
hollowed shelf to support the uterus J. It is
Dr. Ward's & is made both of g. percha & wood.
Ring pessary is usually used. Fehr's ankyle's
has a stem & a shelf formed of two rings which
are hinged on to it. Hodge's is a curved
spring C. Various kinds have wires passing
outside to give support from the sciatic.
All pessaries must be removed & kept out
from time to time, to relieve the walls from
its pressure, or they may cut their way
through the walls of vagina.
Hodges Pessary is one of the best
Has ulcerative action of pessaries has cured some cases.
Pregnancy sometimes a temporary cure of prolapsus.

Lecture 8. Lanct. 18th 1878

* 9

Retroversion & Retroflexion

Pathological condition

Supposed variety

Reasons for its more direct consideration

Causes

1 Atrophy { of subcutaneous tissue
of fibro muscular tissue

2 Relaxation of ligaments

3 Pressure of distended colon

4 Increase in size from

a Inflammation

b Sub involution

c Tumours

5 Particular adhesions

Symptoms

a Functional

b Physical diagnosis

Speculum ?

Pelvic

Sound

* 9

Treatment of Prolapsus Uteri (Continued)

In the case of the pessary ulcerating the vagina, the wounds sometimes contract after & cure the case. In fact there are metal pessaries on purpose to cause a circular ulceration, which forms a cicatricial band & this & the lessening of uterus relieves it. Rest in bed often cures the case. But sometimes this is only a temporary cure. Caustics are also used to make raw surfaces & cure in the same way. Also the specimens has been sewn across for the same kind of cure, this is the operation "Episio-Perineorraphy"

Episiorraphy is denuding the labia majora of skin & then allowing them to heal & contract.

Colporraphy is making a V shaped raw surface in the vaginal passage, which causes it to contract & lessen the passage which keeps up the prolapsing uterus

Amputation of Cervix is also performed when there also elongation of that organ.

Anteversio Uteri

Normal inclination of Uterus should be on an axis represented by the continued axes of the pelvic brim. Sometimes it is quite straight, as 1 & 4. Anteflexed as 2. Anteverted as 12. Retroflexed as 3.

Retroverted no 12. Laterro-verted no 12. These are by Parvas + on 111 cases. The Anteverion deviations are the most common

Anteversion is uterus turned forwards. Anteflexion is uterus bent forwards & downwards.

Mean Age at wh. menses appeared (see tables)

Complications with Flexion - Metritis, Endometritis, & often Cephalitis. Tumours often.

Symptoms - Patients of neuralgic. Great pain at menstrual periods or dysmenorrhoea. Often the women are sterile

In 250 married women who had never had children

103 had Anteversion

68 had Retroversion

In 255 who had once conceived but ceased after

61 had Anteversion

111 had Retroversion (Macroni Times)

Diagnosis - By physical examination. To make internal & external. To certify your diagnosis pass the sound passing it in in the direction you suspect the flexion to be. Have the bladder previously evacuated

Treatment - Rest in the recumbent position as much as possible during the day. Elevate the bed foot. Remove any complications that may be present.

& especially if any inflamatory process be present

Restoration of Uterus - Do so by means of the sound.

Pregnancy often follows this straightening of the uterus. Use the sound just before the menstrual periods for several months. Pregnancy may follow from the dilatation of the cervix that occurs

Retention - It may be brought about by keeping in the sound for about ½ hour when you pass it. If this does not suffice use a stem pessary of metal as espoused to. The great drawback to intra uterine stem is its liability to get displaced. Use a very light one & support it if necessary by a vaginal pessary, or a padding of wadding & glycerine. The stem must be used especially in Anteflexion. In Anteversion a vaginal pessary is generally sufficient.

In cases where the Cervix Uteri for Anteflexion the posterior lip might rub to front & form, then he notches the Ant. wall at os & this gives free exit to menses & sometimes pregnancy follows. Another way was to make a raw surface on Ant. wall of Cervix & another on Ant. wall of Vagina let them unite & thus keep Uterus in place by action on Cervix.

Lecture 9. January 25th 1875

*10

Retroversion & Retroflexion of the Uterus

Pathological conditions

Symptoms rarely (shown before)

Means for its non detection

Causes

1 Atrophy } of sub mucous

Differential diagnosis from

a Pregnancy

b Fibroid or other tumours in back wall of Uterus

c Ovarian tumours in early stage

d Inflammatory & Hæmorrhagic effusions

e Extra uterine conception in cavity of Douglas

f Organic disease in anterior wall of Rectum

g Stricture of Rectum

Consequences & complications

Dysmenia

Prolapse of rectal or vaginal wall

Hydrometra & Hæmatometra Hydronephrosis

Treatment

What cases should be treated?

Non surgical positions

Incomplete Prolapse
Removal of any co-existing morbid state
Restoration of uterus to its normal situation
Retention of replaced Uterus
Pessaries
Rectal
Vaginal
Uterine
Pessary

*10

Retroversion & Retroflexion of Uterus

Once supposed to be very rare. Retroversion is bending backwards of uterus on itself & Retroflexion is a more complete flexion on itself backwards & downwards. No any reasons for its non detection. Tumours & Head soft of Uterus.

Causes - (1) Atrophy of wall at the point where it is bent backs (2) Slow weakening & relaxation of the Post. ligaments (3) Upward the constant pressure of a distended colon pushing it backwards (4) Thereare no sign from inflammation, subinvolution or tumours which may drag it backwards. (5) Peritonitic Adhesions from Peritonitis & when they

contract they draw back the fundus & retain it in this abnormal position. These are very intractable cases.
Symptoms (a) functional, as sterility, some degree of sickness, menorrhagia, dysmenorrhoea & second amount of menses or may be Metrorrhagia. Often leucorrhoeal discharges during intermenstrual periods. Often woman suffering as well. May be of bladder, rectum from pressure of fundus. Some have great difficulty to walk almost like paralytic in some cases, dont know reason. Pain in the back very common. Some patients remain invalids for years & years.
(b) Physical Diagnosis. Speculum no good for it alters the position of the cervix. The finger is best instrument in the vagina, only one in virgins but two or more in women having had a child. Having diagnosed your case with the fingers that it is the fundus in the speech of Douglas, then certify your opinion by passing the sound bearing first bent it to the direction of the flexed uterus
Differential Diagnosis from
(a) Pregnancy. No menstruation &. Beware of passing the sound on account of abortion
To fibroid or other tumours. From hardness & well outline. Does sound which will go in in the proper normal direction, the tumour remaining on the back

Sum round the tumour & it will left the tumour

(c). Ovarian tumours - or inflamed - It feels to have a movable independant action while fundus is fixed, or any is also painful

(d) Inflammatory & Hemorrhagic Effusions - Ute are active symptoms & fixes the fundus & surrounding parts & is also very painful to touch.

(e) Conception ute Pouch of Douglas - By strict examination

(f) Also Organic disease in Ant. wall of Rectum - must be felt.

& Structure of Rectum - has often been confounded with Retroflexion & vice versa

Consequences - Might cause Peritonitis to come on from its pressure. Or might cause gangrene of Rectal or Vaginal wall, or Hydrometra Hematometra or Hydrencephalocele

Treatment - All cases should be treated if possible

Let patient recline as much as possible with the foot of bed or hips elevated, this relieves but does not cure. If there be any co-existing morbid state remove it, some practitioners say there always is & that the retroflexion should not be treated but the coexisting state alone & that then the uterus will right itself. But so far when patient gets up again & goes about all her symptoms return again therefore if possible

restore uterus to its normal position. Place the patient and her knees & then return the uterus by finger from Post. Fornix, or by combined internal & external action push it forward till it lies against the back wall of the bladder. If necessary use the sound, pass it up & then turn it round & then upon withdrawing the fundus & thus replace it. Don't make any violent effort & there is no danger & only in case of pelvic adhesions after Retroflexion we must retain the uterus in its position. For this purpose Hodges Pessary is about the best instrument. Sometimes this is not sufficient & we require to use also an intra uterine stem Dilation of Cervix Uteri by a tent (sponge) then pass into the sponge a stem pessary & thus often cases cure.

For Lecture XX (for Jan. 31st) see Page 22.

Lecture XX. Feb. 5th 1878

For Lecture preceeding this for Jan. 31st see 4 leaves back it should be above but was misplaced

Cystic Tumors (Continued from Page 75)

Differential diagnosis

1 From Retroflexed Uterus - Use the sound

2 From Gravid Uterus - Observe the various symptoms & make also a

Surgical examination - & obtain consistence of tumour. Often well to suspend your diagnosis for some time till you can make certain. Remember the brisk & foetal heart.

3 Fibroid Tumours - Differs in position mostly central in middle line but this not a very efficient guide for a fibroid may grow from any part of uterus & it may even fill up the whole abdomen. Differs in form, the fibroid being sympathetic in outline while cystic is irregular, but fibroid may consist of nodules but these they are more distinct. Differs in consistence, uterine being solid, ovarian fluctuating & more or less soft as a rule. There are occasionally soft sorts of oedematous fibroids, but they may contain cysts or cavities, but they vary from time to time from contraction of muscular fibres. Differs in vascularity, can feel cystic impulse through uterine, but this lost in ovarian, the uterine have so large a development of vessels that you may even feel the pulsating on the surface of tumour & hear them with the stethoscope, but not so with the ovarian. Fibroid is attached to the uterus & moves it if we move tumour through the parietes, but the ovarian tumour is free from the uterus. The sound will often show that the uterus is free in case of ovarian. Fibroid alters the size of uterus, ovarians does

4 Ascites – 1st inspect the parietes, in ovarian they are greatly distended & veins in them are distended from pressure of ovarian or vessels in ascites there is no special development of the parietal veins. Abdominal walls project forwards with Ovarian, but in Ascites they bulge more to the sides. Palpation may in ascites often feel the walls of cyst through parietes as from their floating one each other on breathing which is not so in Ascites. Percussion – Ascites remain in same position, Ovarian extends up & pushes the coils of intestine up above it & hence there is a dull note all round the umbilical, but resonant from the bowels above it. In Ascites we get a clear note round umbiliciens from fluid floating intestines up, but a dull note at sides when patient lies on her back, if lying on side, top side giving ringing note & bottom side dull & so also if she turn on the other side, if she sit up the fluid gravitates down & feel it fluctuate no fluctuation of Douglas. Lastly tapping & chemical & microscopical Constitution of fluid

5 Symptoms & pregnancy – Ovarian tumours disappear under Chloroform. Are Lymphatics

6 Tumours of Omentum – Does not extend down

into pouch of Douglas & tumour cannot be felt through pelvic roof & we can always pass our hand in below the tumour between it & the pelvic brim. Difficult to diagnose cystic tumours of broad ligaments & Fallopian tubes - they are single cysted & thin walled in most cases Ovariotomy has been thought to be performed when it has been found that the ovary is not removed at all but one of these cystic tumours. They are more amenable to tapping.

7 H Hydronephrosis - often of large size very difficult to tell from cystic of ovary. It grows slow. Can be traced away from pelvic organs. Tapping.

8 H Floating Kidney - not difficult to diagnose

9 & 10 Tumours of Spleen & Liver - Can make out the shape & position of the organs.

11. Faecal Collection - Lumpy bowels

12 & 13 & 14 Hydrometra Distended bladder & Dermoid cysts

Treatment - Some cysts have burst & absorption & cure taken place. Some have ceased to grow from bursting of cyst. This condition was found to produce inflammation of peritoneum & the wall of tumour has got adherent to intestine or

abdominal wall & have emptied themselves into it sometimes cyst has burst into abdomen & perhaps containing irritating fluid has caused death. May be death from shocks on bursting of them.

Tapping sometimes cures, but generally fills & is repeated time after time till death from exhaustion &c. Keeps up the state of health. Relieves pressure symptoms &c & subdues any local inflammation. Absorbent medicines are of no use. Pressure was tried for to cure them but it is no use & fails.

Paracentesis - sometimes exploratory sometimes to give relief when urgent. Sometimes this cures though very rarely. If the aspiratory syringe draws off the most fluid. Let her lie on her back & draw in breast about 1 inch below the umbilicus for largest cyst is generally situated there. Use as small a trocar as possible. Care to cause collapse of the fluid & cure. It may cure for months or years but usually it returns in a few weeks from one of the secondary enlargements taking the place of the last large one. Also though simple is a serious operation & often causes death may be from peritonitis septicaemia &c

Another mode of treatment is to tap, squeeze out most of the contents & then endeavour to keep them a com-

communication between the interior of the cyst & the serous interior of the abdomen & then absorption of the evacuated fluid might go on by means of the serous membrane & a cure gradually accomplished from collapse & adhesion of the cyst walls.

Lecture 12. 25 Sept. 15th 1878

* * 12

5. Injection of Iodine
6. Ovariotomy
   - History of operation
   - Contra-indications
   - Mode of performing the operation
   a. Preliminary measures – Sick Rooms Regimen
   b. Instruments required
   c. Position of patient
   d. The operation
      1. The incision
      2. Evacuation of one or more cysts
      3. Separation of adhesions
      4. Extraction of tumour
      5. Securing of pedicle
      6. Cleansing the peritoneum
      7. Closing the wound
   e. After treatment.

Neoplasms of the albuginea Tubes

I Uterine tumors

II Carcinomas

III Uterine collections

Etiology

Pathological anatomy

Symptoms & diagnosis

Prognosis

Treatment

Exploring needle

Aspirating syringe

Neoplasms of Uterus

I Myomata or uterine tumors of uterus

Frequency

Anatomical Pathological & Physical characters

Their size, number, weight

Place varieties

1 Sub Cantonal

2 Intra mural

3 Sub mucous or Intra uterine

Their forms of degeneration

1 Fatty degeneration

2 Edema

3 Ossification.

Treatment of Cystic Tumours (Continued)

5. Injection of Iodine have been used but not very successfully

6 Ovariotomy

Most successful. First performed by a surgeon Ephriam ____ of Kentucky. Not done again till Lizars of Edinburgh performed four cases but none were successful, one was a case of spurious pregnancy & another of fibroid tumour & hence not touched. Mr. Clay afterwards took it up in Manchester. Then Mr. Washington Atwell & his brother John. Then Spencer Wells took up the operation. But Mr. Keith of this city Edinburgh is the most successful operator. The mortality from this operation has fallen to about 1 in 5 cases If after a successful operation the disease returns in the other ovary of patient must operate & extirpate the remaining ovary.

Some said tapping was sufficient & that the operation was unnecessary but it is only palliative while ovariotomy if successful gives complete immunity

Diagnosis - Is of some consideration as to amount of adhesions, whether pedicle can be easily secured & in fact the fear of its not being Ovarian tumour at all

Contraindications - Cayanee disease of kidneys, heart

Ovaries &c

If we have to do with malignant ovarian disease the successful removal is very doubtful

Great amount of adhesions forms a great obstacle to operating - Can only tell this by amount of motion of tumour on breathing having your hands on the parietes & by feeling its pedicle through vagina sometimes after making an incision may find the adhesions too great then put in a canula or drainage tube & thus cause tumour to collapse & stretch w/ the incision.

Your operate till tumour has attained a considerable size & best generally to tap it & give patient a chance of cure by tapping first

Attend to diet, tonics, régimen. Operators prefer to operate at patients home & success here is far greater than in hospitals

Instruments - Knife Trocar & Canula Aspirator Catch forceps Clamps for pedicle. Needles wire thread hair catgut &c.

Position - Put laid on her back on a table near to the window. Keep her covered as well as possible. Hot bottles to feet. Some operators have the room heated. Cover the abdomen with a sheet of oil skin with hole cut through it to do the

Operation through, & the part under this side is the only part of patient that should be exposed

Incision - 1" now below & umbilicus (about 1 inch) down in median line to above the pubis

Cut down to the peritoneum & don't mistake it for the tumour which has a blue look & more clear & glistening. First make only a small incision into peritoneum till you are quite sure about the peritoneum. Then make an incision about 3 inches long, pass in your fingers & feel if the adhesions are not to fast & far spread then enlarge your opening, then tap the tumour gradually pulling the tumour out of the opening so that some of the fluid out of the tumour may pass into the peritoneum after collapse of tumour, separate the adhesions with handle or scissors of fingers tying all bleeding points as you go on. Then drag out the tumour & set about tying the pedicle through which pass large vessels, which must be secured by a clamp. Some tear a canterize the pedicle first securing it with a wet clamp & cutting off the tumour. Some secure it with ligature cutting it short & letting it drop into the cavity. However you secure it be sure you have no oozing. After this look carefully at the peritoneum throwing light down into the cavity with

a mirror & with hot warm sponges remove any small blood clots &c.

In closing the wound mind you bring the serous membranes close together by their edges. Use 6 or 8 sutures according to size of cut. Then bring upper margins together & have it completely closed in all its length unless you close pedicle with a clamp. Gland at lower margin of wound.

After Treatment - Use catheter. Milk, beef tea, Temp. often rises some. Remove clamps after all chance of hemorrhage has ceased & any decomposing particles. The patient should be turned upon as after labour. The sutures may be taken out after about 7 days generally

Of Diseases of the Fallopian Tubes

Of Inflammation & therefore not of great importance

1 Of Uterus - are rare & nothing to differentiate them from fibroids of uterus. It is not a disease just confined to tube itself. Treat same as if of uterus

III Dropsy of the Fallopian Tubes - Either from lining membrane or inflammation of peritoneum spreading & blocking it up. This causes a tumour. Must use the exploring needle this causes collapse of cyst

Lecture 13 of Oct. 12nd 1878

* 13 Neoplasms of Uterus (continued)

4 Calcification
5 Carcinomatous degeneration

Etiology

Symptoms

1 Enlargement of Abdomen
2 Disturbance of functions of Uterus
   a. Disordered Menstruation
   b. Leucorrhoea
   c. Sterility
3 Interference with Rectum & Bladder
4 Local pains from mobility & pressure
5 Sympathetic Pains
6 Lesions of Circulation
7 Lesions of Respiration

Physical Diagnosis

A. Pelvic
B. Abdominal

A. Pelvic

1. Vaginal or Rectal Exploration
2. Vaginal or Rectal Exploration combined with external Palpation.
3. The Sound.

3. Abdominal

1. Palpation
2. Percussion & Auscultation
3. Internal & External Exploration
4. Sound
5. Sponge Test

History of the Case

Differential diagnosis from -

1. Pregnancy
2. Ovarian Tumours
3. Tumours of Omentum (Fibroids & Hydatids)
4. Pelvic Cellulitis or Hæmatoma
5. Acute or Retro flexion
6. Faecal impaction in Colon or Rectum.

Complications Prognosis

Treatment

I Medical

1. Pelvic Inflammation
2. Use Absorbents

Iodine, Bromine
Carlsbad & Homburg waters
Galvanism

II Surgical

(A). Palliative

1. Bleeding Tumour

2. Applying Plastic Bandage
3. Applying Vaginal Pessary
4. Hemostatics in Menorrhagia
5. Astringents in Leucorrhoea

B. Radical

1. Uterine Dilators
2. Division of Mucous Membrane
3. Enucleation the Tumour
4. Excision
   - By Knife
   - By Ecraseur
   - By Galvanism
   - By Torsion
5. Cauterization
6. Castration *13

Fibroid Tumours

Very common indeed. Almost in every woman after middle age. Called also Myomata

Histology of Fibroid - Dense fibrous structure. Surface glistening. Fibres are arranged in bands & on section of a tumour looks like a series of cotton balls laced up together. They contain the same histological elements as the walls of uterus viz: quantities

of areolar tissue, at the glistening parts fibres of connective tissue, & at dull parts they consist of unstriped muscular fibres.

They have been called

Fibromata — when very fibrous

Myomata — when very muscular

Best to call them all Myomata. They have a malignant clinical history, but are benign. In ulceration they are apt to undergo the same changes as the uterine walls. In a tube they are less vascular than the uterus, but sometimes they are equally so, & some are more vascular such as the Myomata Cavernosum in which large vessels are channelled out. Less vascular the more dense they are. The smaller are usually the most dense. They sometimes become much softer from formation of cysts in their interior. These cysts are not of large size & their fluid contains numbers of hæmatoxin dyed muscular fibres.

The tumours lie in a sort of Capsule

Their size Weight & Numbers varies greatly, from size of a pea to enormous dimensions, from a few grains to 60 or 70 lbs & filling up abdomen, may be a great number of small ones, or a lot of small ones & one large one, may be as many as 50 or 60 small ones, or only one large mass & thus may have a number

of small nodules projecting from its surface.
Varieties - Three. But they are all developed from the middle muscular wall of Uterus. Three kinds are
1. Sub-peritoneal - These arise from outer plane of muscular coat & though at first they may have been covered with it thin muscular layer, this has got thinner & thinner till it is cleared off & only the serous covering remains, & then tumour gets more & less pedunculated from muscular wall pushing or extending it out & from its own weight. In some cases this pedicle has got twisted off, in other cases it becomes unrecognizable from surrounding adhesions taking place. These tumours get very hard & firm.
2 Intra-mural or Interstitial - Generally smaller in size & are invested by muscular fibres of Uterus & hence are less easily recognized & lie in a distinct muscular capsule
3. Sub-mucous - These gradually get drawn down into uterine cavity so-on through Os Uteri & into the Vagina their pedicles becoming elongated. They often form the so called Uterine Polypi.
Degenerations of Fibroids - Five kinds.
1 Fatty - This change can often be traced especially in puerperal womb where tumours often undergo the same changes as the Uterine walls themselves & thus is

a mode of spontaneous cure.

2. Œdema - sometimes occurs & enucleation of the tumour which is expelled in a bare state

3 & 4 Calcification & Ossification - Both changes may occur & if the tumour be then discharged it forms what is called a Womb Stone. This change often occurs in the fibrous tumours, may be at the change of life. And calcification is the intended result of the Ergot treatment.

5. Cancerous degeneration - This is not a change to which Myomata are especially liable, for such a disease may be present at the Cervix & still not occur in a tumour present. But still it does sometimes occur

Histology - Not known frequently

Age of occurrence - during actual menstrual life generally. Very rare in children. Very frequent after middle life. In America they are found to be far more common in negresses than in white women.

Symptoms.

1. Attracts first gen. complaint of enlargement of abdomen both physiologically & mechanically.

One of the Queens Maids of Honour was declared by the Court Physician to be pregnant, but on further examination it was found she had a fibroid tumour. On this all the ladies about Court began examining

Mucous abdomen & discovering fibroids in them
2. Early disturbance of Uterine functions. Especially if from sub peritoneal tumour when menstruation is disturbed as to quantity &c. Dysmenorrhœa. very common & especially if tumour be pedunculated & hanging down into cervix. Menorrhagia - especially from a large intra-mural from its causing large separation of uterine wall & enlargement of vessels. Leucorrhœa - at inter-menstrual periods from a state of chronic endometritis, it is sometimes very profuse & if foetid it may cause a fear of malignant disease. Sterility - From the various reasons which these tumours cause
3 Interference with functions of Rectum & Bladder - As causing Diarrhœa, Piles &c. Retention of Urine. Want to micturate frequently. For this use the Catheter often
4. Local Pains - As on pressure or without as over Uterus & neighbouring organs &c
5 Sympathetic Pains - As in loins, under left breast &c.
6. Lesions of Circulation - Bruit like that from pregnancy may often be heard. Œdema &c
7. Lesions of Respiration - As from a large tumour spreading upwards & filling abdomen
Surgical Diagnosis -
A. Advise
(1) Exploration of Rectum & Vagina both separately &

together & (2). Use these combined with external palpation of abdomen if tumour be abdominal. Then certify by using the Sound

To Abdominal

Use the above means. If the hand cannot pass far between the pubis & the tumour in inserting it below the tumour. Percussion gives a ring of dull sound & outside this a tympanitic sound. Auscultation reveals a bruit generally at the sides of uterus from the same causes as that of pregnancy viz from the enlarged arteries. Tumour - is hard firm & fixed to the feel. Confirm this by using the Sound. Recognize that the tumour springs from the uterus. The Cervix may be drawn upon so as to render the Os inaccessible, sometimes you cannot & at other times you can reach it. When you pass the sound it may perhaps impinge on the tumour, by passing it by it the sound will pass in a varying length according to the size of the tumour. If the tumour be Sub-mucous we can confirm all this by the introduction & use of the Sponge or Tangle Tent.

History of Case - Must be taken into consideration. Its growth is slower than the gravid uterus. Watch its progress & if it increase much in size in 3 or 4 weeks it cannot be Gravid unless it contain cysts

Differential Diagnosis from -

1. & 2. Pregnancy & Ovarian Tumours - These have already been treated of.

3. Cancerous Tumours - By their great pain &c

4. Pelvic Cellulitis, Hæmatoma - By their sudden start & rigors. Acute pain & intense suffering.

5. Rectal & Retro-flexion - Already treated of. Use the sound if any difficulty

6. Feces in Colon or Rectum - By clearing them out.

Complications - May be Inflammations of Uterus or surrounding organs. Endo metritis. Peri metritis. Cervicitis. Adhesion of tumour fixing it down in pelvis & thus causing pressure on the neighbouring organs & the complications resulting therefrom.

Diagnosis - Rarely dangerous to life if uncomplicated. They are non-malignant growths. They are most troublesome from their interference with neighbouring organs & sometimes fatal from the hemorrhage they cause. Their growth is generally very slow. They generally cease to grow at the climacteric period of life. If it does & does lessen it may get more dense & solid, calcify & may be then expelled. But if they remain soft & cystic they may go on growing.

Lecture 11th March 1st 1878

* 11th

Sarcoma Uteri

Structure
Seat - In Parenchyma of Organs
In Mucous Membranes

Etiology
Symptoms & Diagnosis Prognosis
Treatment.

Sarcoma Uteri

Pathological Forms
1 Epithelial Cancer
2 Scirrhus
3 Encephaloma
4 Ulcerative

Its Anatomical Seat
1 In Cervix
2 In Body & Fundus

Etiology
Symptoms
A. Local
1. Pain
2. Menorrhagia
3. Leucorrhœa

B. Constitutional
1 Anaemia
2 Cachexia
3 Fever

Diagnosis
Differential Diagnosis from
1. Inflammatory conditions - ulceration & hypertrophy of Cervix
2. Fibroid Tumours
3. Polypi
4. Incident collections in Pelvis

Prognosis
Date of Uterine health in early life of 120 women affected with Carcinoma Uteri

20.8 P.C.	women had good uterine health	
15.8 P.C	"	suffered from Amenorrhoea
0.83 P.C.	"	irregular menstruation
1.66 P.C	"	Menorrhagia
54.16	"	Dysmenorrhoea
6.6	"	Syphilis

* 11 Cases

Fibroid Tumours (Continued)

Treatment -
1. Medical - Relieve inflammatory symptoms. Use

Iodides, Bromides. Carlsbad & Harrowgate Waters of Germany. Galvanism, all having hindered the growth & had a beneficial effect. often thought not always. Bromide of Potassium is one of most useful salts for relieving congestion. Best treatment is the subcutaneous injection of Ergot to produce dwindling & absorption

2. Surgical - A. Palliative. All we can do sometimes When tumour fills up the uterus & presses on bladder to relieving tumour up into Abdominal Cavity often relieves. It must be kept in position by bandage. Also if already in abdomen let patient wear a supporting bandage. Or wear a Pessary. To overcome if Haemorrhagic & Astringent injections for Leucorrhoea

B. Radical -

(1.) Of uterus Processes. (2.) Excision of Mucous Membr. first opening up Cervix by Sponge Tent, or by slitting up the Cervix with knife or scissors (This alone may sometimes cause expulsion of Fibroids), then having got access divide Mucous membr over surface of tumour with a knife & it arrests the hemorrhage by forming healthy edges & also assists in the tumour being extruded into uterus & becoming pedunculated.

(3.) Tumour sometimes sloughs away in uterus & this

process has been attempted by gouging out tumour bit by bit but this is as dangerous as more radical methods & hence not much used

Excision of Mass - By knife, scissors, Probyn's bone, Forceps or Torsion of tumour be Polypoid cutting through the pedicle with these various instruments. They have also been removed by ligatures tightened day by day, not much used now. for fear of absorption & on account of length of time Best mode is torsion, getting hold of tumour with a Volsellum & twisting round & round. If tumour not Polypoid use Ecraseur passing through all the resistant points, dragging through it covering of tumr. Membr. Cuscle is of great use in this operation. This is a very dangerous operation & only used when patients strength is ebbing away. b Galvanotomy - formerly very fatal & out of it died. but not so fatal now but is still more dangerous than Ecraseur for you have to cut through walls of Uterus & may be of Vagina

Parenchymal Uteri

Still have much overlooked, or wrongly described heads - Two. (1) Fibro muscular or (2) Fibro

mucous membrane.

If you operate on a fibroid it begins to grow again it is probably a Myoma - Sarcoma. Remove this & if it grows again it is probably now Sarcoma Myoma the sarcomatous element now developing. Or may be a Sarcoma from beginning

Structure - It may be round cells & spindle shaped. Its gross aspect on section & softer than myoma.

Retiform growths & grow towards internal surface of uterus & ulcerates. more or less, the whole wall & is not in a capsule, though it may be forced down into Uterus & then often causes flowers ind of Uterus from its forming a more or less integral part of Uterus If grow from mucous membr, are spread over wide surface are round celled & of more rapid growth Occurs principal before menopause though as early as 20 yrs & as late as 60 years of age

Symptoms - Almost constant hemorrhage & menorrhagia often a foetid sero-purulent discharge, the cervical canal often opening itself & easy of examination. After it appears sterility is caused always, & thus differs from fibroids & Sarcomata. Pain is not a usual symptom, but may be from pressure effects of ulceration & also attempting to expel it or from neighbouring inflammation. Debility & Cachexia

Diagnosis - By physical examination. Felt in wall of uterus through vagina. Uterus freely movable. Sounds passes in easily unless it impinges on tumour. Separate off some of tumour & examine it under microscope.
Prognosis - Unfavourable. Only one case of radical cure known & that was not sure. Sarcoma. Always returns. Many undergo Caesarean when degenerated. Hanes classifies it among Carcinoma. Vicious tendency to recur.
Treatment - Always remove it if at all possible & some part of uterine wall as well with it just as you would a Polypus.
Astringents (strong) applied to it directly & the injection of mild astringents. Ivine recommends

Carcinoma Uteri

So common that woman all think anything ailing their uterus is Cancer. 6.6 2 Per Cent of women over menopause die of it
Structure - Epithelial cells in masses which develope in tissues of Uterus were there are no other epithelial cells among the surrounding tissues &

these form cells & nests & masses & go on developing these & forming large masses. The cells are large, many nucleated & grow very quickly indeed. According to size attained by these cells & the method & manner of growth & way they spread & as may be found hard mass Schirrus, or may be grow into mass of warts like a mass of Cauliflower &c) so they get named & classified into Epithelial Cancer, Schirrus Encephaloma & Ulcerated.

Lecture 15 March 9th 1878

* 15

Age of Patients affected with Cancer of Uterus

Under 20 yrs old	
From 20 to 30 yrs	12 cases
" 30 to 40 yrs	83 cases
" 40 to 50 yrs	102 cases
" 50 to 60 yrs	201 cases
" 60 to 70 yrs	4 cases
	4 cases
Total	406 cases Browne

Epithelioma Uteri in reference to Marriage

Single Women	in 7 instances	or 5.83 P.C.
Married "	in 104 "	or 86.6 P.C.
Widows	in 9 "	or 7.5 P.C.

Of the 113 married 103 had children & 10 were childless or 8.8 P.C.

Mortality from Cancer in England as Regulated by Sex

Year of Report	Total Fatal Cases of Cancer	Females	Males
1859	7369	5406	1963
1860	6827	4727	2100
1861	7276	5096	2180

Table of 91058 deaths from Cancer in England (1847-61) & Scotland (1855-58)

	Actual Numbers		Relative Proportion	
	Males	Females	Males	Females
Under 10 yrs	617	626	100	101
From 10 to 15	134	147	100	109
15 25	562	659	100	123
25 35	1244	3176	100	255
35 45	2717	9975	100	367
55 65	7220	16.668	100	335
65 75	6286	11.840	100	188
75 85	2637	4.616	100	175
85 95	364	689	100	189
95 & upwards	20	39	100	195

*15

Carcinoma Uteri (Continued)

May be Epithelial in form or Cauliflower form &c
Post mortem appearances — very vascular & friable to touch

down & give rise to great bleeding

Schirrus - rather uncommon. Feel like nodules or heads of brass nails in thickened uterus, apt to break down & ulcerate

Encephaloma also - very common & spreads to uterus & all surrounding organs. Fungating, apt to ulcerate & cause hemorrhage

Ulceration or Rodent - Rare. Schirrus or other cancer breaking down & not a distinct form.

Foetal - Cervix most common at start genl at external orifice, or occasionally entirely within uterus

Cancer - Genl. for instance Cauliflower excrescences growing out into Uterus causing Patient to be Cachectic. Great tendency to hemorrhage & leucorrhoeal discharges draining health away. There may be no secondary deposits & fatal from exhaustion in this form - Thickening & induration of cervix infiltration - spreading - necrosis & ulceration on surface, free hemorrhage. Proliferation among tissues extends also to even cavity of uterus, to walls of Vagina, into Rectum to deposits in glands - Inflammation - Pelvic Peritonitis & fixation of uterus & matting together of all organs. Often fistulous openings (28 out of 93 cases of

fistula V.s. V. ag. &c.) Distension of Ureters & preg. Hydro-nephrosis. Pressure on Colon Thrombosis of Uterine Veins may occur. Patients health gets deteriorated from absorption of degraded material Announced Cancerous Cachexia.

Blood again cancer in body of Uterus - itself. This may be superficial with ulceration & destruction of walls of Uterus, inflammation, peritonitis apt to be excited spreading uterus to neighbouring organs & disease spreads through bladder & rectum & the first most commonly & into Peritoneum & quickly fatal

Etiology - Still in the dark. May be hereditary

Age - May occur in children, but rare before period of puberty

Race - The Black Races have almost perfect immunity from it. Not 1/2 deaths in blacks as in Whites

Effects of Marriage - (See table) Of 113 married 103 had children & 10 had not

Symptoms

A. Local - 1 Pain - Uncertain when it may come on & is not affected by motion or pressure. Usually comes on in paroxysms of a frightful lancinating character Usually a continual gnawing pain in sacrum, or beneath left breast. The paroxysms may come on

at regular intervals may be once in 24 hrs or oftener. It may come on towards morning or towards may be every day or 2 or 3 days. Comes on gradually & gets more intense till it is frightful & it also goes off gradually. Some cases especially in epithelial variety of Cancer produce none of this acute pain. 2 Menorrhagia - Generally present in all cases & often first attracts attention. It comes on by increasing menstrual discharges, but it gradually gets more & more continual till always flowing. It varies in amount & sometimes causes death itself 3 Leucorrhœa - Acrid frightfully. According to amount of necrosis. Acrid & irritating B. Constitutional - Effects from local action. 1. Anæmia - 2. Cachexia - 3. Fever

Diagnosis - Must make a direct simple digital examination. Be careful in using the speculum for it easily damages cancerous surface & sets up bleeding. You feel enlarged cervix uteri (or if Epithelioma you feel the excrescences) which is enlarged irregular & nodulated & some breaking down of its surface & non granular as in ordinary ulceration & its bulk is rough & broken. Cervix Uteri is also early fixed & begins at roof of vagina. If any doubt Specific bury says introduce a

Sponge test – when of Cancerous the Cervix will not dilate the nodules remaining hard & indilatable.
Use the Sound. Also use Curette & scrape of some for microscopic examination
Diagnosis from :-
1. Inflammation – This is regular must be
2. Fibroids – Easy
3. Polypus – By Sponge test
4. Purulent Collections – Some suddenly but cannot feel any morbid material. Can only feel mass through walls.
Prognosis – Only hopeful form – are the Epithelial form of Cancer which can be removed.
Treatment – A. Constitutional – Careful diet & regimen & some medicines especially Iron & Arsenic which is supposed to hinder its spread.
B. Local – To alleviate Relieve pain by Opiates especially at bedtime. Given by mouth rectum or subcutaneously. Dose must be gradually changed But change Opiate frequently. Morphia & Belladonna Suppositories are very good & useful Introduction of Carbonic Acid Gas into Vagina. To check Inflammation & Ulceration use the various injections of Iron Tannin Acid Sulph Alum Carb Soda & also disinfecting injections as Condys

Dilute Vinegar Boracic & Carbolic Acid &c
If want soothing application - Bismuth or Oxide of
Zinc, Pessaries.
2. Radical - (a) Extirpation of whole uterus. It is
far too fatal an operation
B. Removal of Cervix - Remember great hemorrhage
& great tendancy to collapse why we
dont know but without hemorrhage or inflamation
Dangers of cutting through into Peritoneum & introducing
air &c into the matter
Mode of Operating - Best to use knife & scissors
ordinarily to amputate the cervix, but if cancerous
it is best to operate with Ecraseur (chain or wire)
but best of all is the Galvano Caustic Wire but
it is so troublesome to keep in good order
for some cases - and only takes away a part. Then it is
best to do it with the Curette, or your finger nail
gradually scraping it away & thus retard the
growth of mass. If actual removal of Cervix or
whole Uterus & patient recovers, she may be perfect-
ly cured but if she does not die of some other disease
it almost always returns in a few years & ends fatally.
Acids some times used as Nitric &c Caustics
Arsenic Chloride of Bismuth Chloride of Zinc.
Sulphate of Zinc (dry powder) & Perchloride of Iron are best

The following Lecture was omitted from Page 21 where it should have followed on after Lecture V.

Lecture 5 December 21st/74

* 6

Endometritis (Continued from Page 20)

Ulceration of Cervix Uteri

1 Simple 2 Syphilitic 3 Cancerous

1 Simple :- a. Erosions

b. Ulcers

Complications

Symptoms :- 1 Pain 2 Leucorrhoea

Diagnosis :- 1 Touch 2 Speculum

Treatment

Inflammation of Vagina - Colpitis

Pathological Varieties

I Simple

II Specific

Acute - Chronic

Causes Course & Termination Symptoms

Diagnosis Treatment

Inflammation of the Vulva = Vulvitis

Anatomical Seats :-

General surface - Follicles - Bartholinean Glands

Pathological Varieties Causes

Symptoms Diagnosis Treatment

* b

Endometritis (Continued)

Treatment :- If Acute it is best met by Antiphlogistic means.

If Chronic we must bear in mind the constitution of patient & attend to diet, regimen & exercise &c. Diet should be nutritive but not stimulating.

If any Cachetic tendancy local measures will be useless unless we attend to such a tendancy e.g. Syphilitic Diathesis. Patients often obtain from Mineral Waters such as those of the Continent. Iron. Cod Liver Oil &c.

Besides attending to general condition must have recourse to Local applications to Uterus itself.

1st. To Cervical Portion - such as Douches, pessaries which may contain many drugs. Even leeches rank as local applications in such cases if applied immediately subsequent to and imperfect menstrual flow. You can make direct applications to Cervix by first exposing it with a Fergusson or Sims Speculum. It may be applied by means of a silver or a

Vulcanite syringe, or with a catheter & various solutions thus introduced into the Uterus, but such injections are dangerous & if you employ them you must see that the Cervical Canal is well dilated so that the injection may easily escape. Sometimes a double barrel catheter is used to facilitate escape of excess of injection. Sometimes the fluids thus injected have passed through the Fallopian Tubes & set up Peritonitis. Many thus apply Tr. Iodine Nitrate of Silver Sol. Chromic & Nitric Acids Sols. Perchlor. of Iron. Zinc Sol. Dil. Chlor Sols. Prof. Simpson prefers to use solid escharotics, or to use two wands one wrapped with cotton wadding to clean the canal, the other also wrapped with wadding but dipped in such as Perchlor. of Iron, Nitric Acid Carbolic Acid &c so as to apply them after first cleaning the canal with the first wand dipped in glycerine. If wand or sound passes easily through Internal Os you should carry it right on to the Fundus In Chronic cases it is best to begin with strong escharotics such as Fuming Nitric Acid, $AgNO_3$ &c. In applying them it is best to pass them through a Cervical Speculum.

These applications are best made immediately after a menstrual period & may afterwards continue milder things as Iodine. Sometimes admirable results from the introduction of a piece of $AgNO_3$ on the end of a quill, the nitrate being left in to dissolve there. Sometimes powdered nitrate of silver is blown on interior of uterus by means of a special hollow

instrument. Per sulphate of Iron is thus frequently applied to restrain hemorrhage. Chloride of Potash is often so applied. There are various forms of Astringents such as Tannin, Zinc Perchloride of Iron &c. These may be applied as arrows. Some have recommended carrying the fumes of Bromine up into the interior of womb by means of a syringe, but forcing up gases as just as bad as fluids. Brass Chloride arrows. In some cases, as when Mucous Membrane is Polypoid, it is useless to use astringents & escharotics, without first scraping the Uterine Mucosa & breaking down the thickened mucous membrane with a sound. After you may apply them.

Ulcerations of Cervix Uteri

I Simple II Syphilitic III Cancerous

II The Syphilitic Forms will not be taken up just now

III Cancerous Forms will be treated of when we come to speak of Carcinoma Uteri

I Simple :- Erosions & Ulcers

They have much the appearance of a cutaneous ulcer, but there is not so much loss of substance. In the common form there is a simple erosion, when the mucous membrane is thickened, red & swollen, & papillæ enlarged with slight abrasion of surface, this is called a "Granulating Ulceration of Cervix".

Sometimes there is an aggravated condition of foregoing, when

margins of Os are left go on without treatment, the edges of Os rubbing on each other & against the Vaginal Walls, causing more & more irritation. These may be accompanied by Herpetic Eruptions or Ulcers of the parts.

If Erosion of Cervix there is usually a distinct Endo-cervicitis.

Symptoms - Uterine & Lumbar Pain. Pain often rather in the bladder than in Uterus. Also often Leucorrhoeal discharge, not clear & albuminous, but purulent. Often also a discharge from Vaginal Walls as well.

Diagnosis - By Finger & Physical Examination. Use the Speculum & we see the morbid process going on. Os is expanded & cervix thickened & indurated.

Treatment - May apply a gentle escharotic as $AgNO_3$. The use of $AgNO_3$ is often useful as an initial step in the treatment, but let me warn you against the repeated applications, once a week may be for weeks, for it gives rise to induration & corrugation of Cervix & even of the roof of Vagina, a sort of cicatricial tissue being formed around Os which even gets completely closed by it & so cause sterility. Or Cervix may sometimes get quite Cartilaginous. Therefore don't continue use of $AgNO_3$. Rather use Tr. Iodine through a Speculum, on a wadded wand. Or use Iodide of Lead, Bismuth, Oxide of Zinc Pessaries all of which have good results. Pushe Pessary right up to roof of Vagina & keep Vagina

clean by using Vaginal Injections. These pessaries are useful when you cannot see a patient constantly to inject the Pt. Iodine.

Inflamation of Vagina = Colpitis

Pathological Varieties :- 1 Simple 2 Specific

Simple may occur in married & unmarried women. May occur in women just after & just before menopause also. Common in young women soon after marriage & often then accompanied by a Leucorrhoal discharge

During progress of Pregnancy there may be reddening, softening & swelling of Vaginal Walls, & this may may go on to actual Colpitis & results in abrasions

In women beyond the Menopause there are often Ulcerations & a creamy purulent discharge

Acute or Chronic Varieties - If Acute it is very often Specific, but may be Traumatic from injuries, or from sexual intercourse. May be from Sexual Excess, Chills from Exposure & sometimes by extension from the Vulva or from Cervix. Also sometimes in some febrile affections. The disease may pass on & become a Chronic Leucorrhoea. It may remain localized.

The Gonorrhoal Varieties, having a discharge similar to that of Urethra in man, show a marked tendancy to ascend & may cause Cervicitis, Endo-metritis, Salpingitis

& even Peritonitis, all of which lessen the woman's chances of conception. A large proportion of sterile cases is due to a gonorrhoeal Colpitis contracted at or soon after marriage.

When a woman gets infected with Gonorrhoea during Pregnancy, the Vaginitis is apt to spread & run on during the pregnancy, thus may extend up urethra & into bladder or affect other neighbouring organs. After the labour it may pass up into Uterus & may even end in fatal peritonitis.

Symptoms:- Discharge, usually profuse & it may be white creamy or green. Great discomfort, as feeling of heat & pain. Pain on micturition especially in the Gonorrheal Variety. Irritation down Vulva & Thighs from discharge.

Diagnosis:- Must be physical examination. The Speculum shows the source of the discharge. It is usually specific in character, can only tell it from simple by the virulence of its discharge & profuseness &c. But to the has a the same treatment

Treatment:- Perfect rest to organs & great cleanliness by syringing with hot water, or douches by means of the india rubber pipe syphon apparatus. If chronic case, need to use some Astringent as Iron, Borax, Tannin, Alumnate of Iron, Sulphate of Copper, Matico, Alumn, Green Tea &c, first carefully washing the surface with warm water. If very fetid discharge use Condy's Fluid, Boracic Acid or weak Carbolic Acid Solutions. In some cases may require

to inject Lotio alba as Coffee Grounds &c
Apply Ag. NO_3 to abrasions. In Senile Colpitis the best
application is powdered Bismuth for it both relieves pain
& dries up the discharges. Unguents often useful also

Vulvitis

May affect whole mucous surface of Vulva, Labia Majora
& pudica Clitoris & Urethra also. Most commonly it is
follicular in character, affecting the follicles on the Labia.
There are no follicles in Vestibule.
Glands of Bartholin may be seat & it is often seat of
Labial Abscess. Often appears in forms of eruptions on
Vulva as Herpes, Pustules, Eczema &c. Often as
Ulcers (as Syphilitic & may be Gangrene in children as
after Scarlatina.
Local symptoms of cases are Specific in character & origin.
Those occurring in young children are most interesting, and
Infantile Vulvitis - a glairy viscid discharge from mucous
glands glueing the Labia together & causing great irritation
of the parts. Some are real gonorrhoeal affections from
Rape, such cases happily rare. The child is usually
of a Strumous character & the Struma thus manifests itself.
The condition is very curable
Treatment:- Cod Liver Oil. Syrup. Fer. Ferri. Immune
Local cleanliness, by great washing with

warm water with a sponge & then apply Astringents
Sponge with Solutions such as of Sulphates of Iron & Copper.
Nitrate of Silver. Dusting with Bismuth. Do these
things two or three times a day
Sometimes labia may adhere after cessation of inflammation.
Readily separated by a little force, then apply ointment
between lips to prevent reunion of lips.
Remember there is a tendency of Virus to spread up into the
Vaginal canals. Open any abcess. If abcess in Bartholins Glands, open the cyst & destroy the interior with
Ag Nt O3. We may require to excise the Glands.

The following Lecture was also omitted from Page 21

Lecture 6 January 5th 1874

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Cystitis

Pathological & Clinical Varieties
Causes Symptoms Diagnosis Prognosis
Treatment :- General
Local

Urethritis

Varieties Symptoms
Diagnosis Treatment

Displacement of Pelvic Organs

I. Ovary { 1st upwards / 2nd downwards
Symptoms Diagnosis Treatment

II. Fallopian Tubes Complication of dislocation of other organs

III. Uterus

Normal position of Uterus
How maintained
1st Upwards = Ascent :- Causes Consequences
2nd Downwards = Descent

Prolapsus or Procidentia Uteri

Causes
Moved downwards by
1. Influences increasing its weight
1. Hypertrophy
2. Pregnancy
3. Inflammation
4. Tumours
5. Fluid in Cavity
6. Masses of Cancer
2 Influences weakening its support
1. Rupture of Perineum

2. Weakening of Vaginal Walls
3. Stretching of Ligaments
4. Want of Tone in Uterine Tissue
5. Absorption of fat in Areolar Tissue
6. Improper inclination of Pelvis

3 Influences pressing Uterus out of its place

1. Tight Clothing
2. Heavy clothing supported on abdomen
3. Muscular efforts
4. Ascites
5. Abdominal tumours
6. Distension of Bladder

Varieties

1. Descent of whole organ
2. Descent of vaginal portion with elongation of cervix

* 7

For * 8 see Back to Page 30.

Cystitis

Usually of a simple catarrhal form sometimes exfoliative More frequently it is ulcerative & usually near neck.

Causes:- sometimes due to alterations of Urine

Inflammation of neighbouring organs, as Pelvic abcess making its way to Bladder, also inflammation of Uterus or Vagina Also retention of Urine Most frequently after

ulcers resulting from pressure. May be excited by catheter especially in Puerperal cases. Lastly may be due to pressure of foreign bodies as calculi, or bodies introduced from without

Symptoms :- Pain on distension of bladder will small quantity of urine, also pain during micturition. If ulceration excessive distress, & constant desire to micturate. The urine is loaded with mucous & pus & is very alkaline.

Diagnosis :- Very evident in most cases. But in milder cases passing sound or a catheter causes pain. Also on examining with finger may feel ulcerations & the greatly thickened wall. Sound does not pass as far as in normal state from contraction of bladder, also may feel its rugose walls. It is sometimes necessary to dilate the Urethra for purpose of digital examination by means of an instrument, but it is generally as easy to do it with the finger alone, or with finger & sound. The difficulty lies at the external orifice of Urethra. The Urethra of a patient in labour is greatly swollen & is easily dilatable & readily permits entrance of finger. Anaesthetise the patient. You may also use the Vaginal Speculum.

Treatment :- If succeeding labour the disease will soon go. Chronic cases are difficult to manage. Attend to general health. Sedatives to allay pain. Alkalies if acid urine. Acids if alkaline urine, such as Benzoic Acid &c. Give free diuretics so as to dilute the Urine. Various

Astringents are also useful. Uva Ursi, Pareira Brava, Turkeum Regium are good menstrual. Keep patient at rest. Counter irritation over bladder, as sinapisms Also detect applications & injections Or dilating urethra is often a curative measure, The tenesmus at neck of bladder is thus relieved. Short of dilating Urethra you may inject $AgNO_3$ or $CuSO_4$. Lastly in bad cases open a fistulous opening from bladder into Vagina then the urine cannot collect in bladder & it so gets rest. Let fistula remain open for a short time. The Fistula is made by passing a sound into Urethra & cutting down on it through the Anterior Vaginal Wall, the opening being kept patent by putting in a metal rod or catheter. The Fistula is afterwards closed by the usual operation.

Urethritis

Varieties:- Sometimes gonorrhoeal. Often a complication of Ulcers or Syphilis

Symptoms:- Chronic patient dreads micturition of bladder from pain. Sometimes hypercamia & may be fissures of the orifice externally.

Treatment:- May cure by passing a little $CuSO_4$ along urethra Or stronger escharotics may be used as $AgNO_3$.

If urine in as arrows & leave them in some time, they smart but usually relieve after. A little carruncles may form as a result

Displacement of Pelvic Organs

1 Ovary

May be displaced upwards or downwards

Usually upwards in cases of Tumour of Ovary. Also when there has been old inflamatory adhesions to abdominal viscera which afterwards raises up abdomen

Downwards displacement more important & more common. Ovary may be due to relaxation of ligaments as the Broad Ligament, or of its own special ligaments. Sometimes increased size & weight of ovary causes this displacement. Sometimes also adhesions of Ovary

May be Acute or Chronic

Symptoms:- Prolonged suffering & continuous pain on one side or other & referred to Ovary or near organs, on movement or even when at rest

Diagnosis: Ovary may be felt behind in Pouch of Douglas. Uterus movable. Ovary may be felt by middle finger, or use 2 fingers in Vagina, & use the other hand externally. Or may pass one finger into Rectum & another in Vagina, & may feel ovary movable between. If Ovary is adherent to posterior wall of Uterus it is more difficult to diagnose for it might be Retroverted Uterus &c, but pass the sound to determine.

Treatment:- To relieve pain let patient lie on her side with the pelvis elevated by raising bed foot, so as to allow the Ovary to move upwards. Sometimes Pessaries

greatly relieve but not if any Complications
Ovary sometimes gets adherent to abdominal organs & thus
pedicle of Ovary may get twisted, leading to constriction &
displacement of Ovary in various directions. May be from
Peritonitis. Lastly may be sometimes found in Hernical Sacs
as Inguinal Hernia. May be one or both sides it may be
Congenital or Acquired but mostly the former 17 out of 23.
Acquired is most common in pregnancy or Puerperium.
There having been a previous Inguinal Hernia into which
Ovary has fallen. Ovary can be recognized by tenderness to
swelling at definite periods & from its painfulness, which may
be periodic or only on touch. Replace it if possible, but it
may have to be excised in some cases. Some have performed
excision when it is lying in Pouch of Douglas. Some
perform doing it through Vaginal roof.

II Of all Uterine Tubes

Its displacement usually occurs along with that of Ovaries. It
is a Pathological curiosity rather than an independent lesion.

III Uterus

Its normal Position:- It ends in level with Pelvic Brim. It
is supported by various ligaments as broad
ligaments, utero vesical, utero sacral, & the round liga-
ments running to abdominal walls. Can move freely upw-

wards, downwards, backwards & forwards & hence great mobility. It even moves with respiration.

1st Upwards :- Uterus as pelvic organs distending but more commonly by growing ovarian tumours, fibroids in its own walls &c,

2nd Downwards :- Much more common & is called

Prolapsus Uteri or Procidentia Uteri

Consists of Protrusion of Uterus even beyond V ulvæ.

Causes :- A- All influences increasing weight of Uterus as

1. Hypertrophy - from any cause. Physiological in
2. Pregnancy - Sub involution after pregnancy
3. Inflammation - In Chronic Metritis Uterus gets heavy.
4. Tumours - As in Uterine walls, not only from their weight but tumour may get fixed in Pelvis
5. Fluid in cavity - as Water or Blood
6. Masses of Cancer

B - Influences weakening its support

1. Rupture of Perineum - This of itself does not produce displacement, but from absence of pelvic floor removing support of uterus which hence sinks down.
2. Weakening of Vaginal Walls - May become relaxed from Cysto cele or Recto cele pulling them backwards or
3. Stretching of Ligaments - Especially just after births there being a want of tone both in Uterus & its ligaments.

4. Want of tone in Uterine tissues as after labour.
5. Absorption of Fat in Areolar tissue of Pelvis, causing a want of padding to support it.
6. Imperfect inclination of Pelvis, perhaps one of most important causes. Normally uterus rests its weight on Anterior wall of Pelvis more or less, but if any abnormal inclination it becomes more vertical & hence the uterine weight presses more directly downwards. Seen in old women who walk with the Spine thrown backwards & hences thrown or bent forwards.

B. Influences pressing Uterus out of its Place

1. Tight clothing - Presses Uterus backwards & it then tends to fall
2. Heavy clothing - supported on abdomen contracting it
3. Muscular efforts - as in working women, as carrying weights, straining &c as in labour &c
4. Ascites - forcing uterus down.
5. Abdominal Tumours - Cystic &c
6. Distension of Bladder - Abdominal wall distension is a common cause. It presses the Uterus backwards & tends to displace it

In any particular case you will note that you may have or all three groups of causes at work at once causing it. We see in Puerperal state when the woman gets up too soon after confinement, ligaments (1st factor) being

relaxed & uterus able large & heavy (2nd factor) & causing abdominal pressure (3rd factor) from muscular efforts.
The descent of Uterus is usually gradual, as its causes are also gradual & insidious, hence we have different degrees & varieties of uterine descent May be perfect & complete or incomplete. Sometimes the Uteri may rest on perineum. The axis further may be changed & be pointed of V altho' V neither the Cervix may completely protrude. or patient may actually sit down on the Uterus.

For lecture following the above see Page 38.

Lecture 16. Mo arch 15th /78

* 16.

Neoplasms of Vagina

Rarely

I Sarcomata & Myoma
symptoms Treatment

II Cystoma
Mode of development Contents
Symptoms Treatment

III Sarcoma
symptoms Treatment

IV Carcinoma
Forms Course
Symptoms Treatment

Neoplasms of Vulva

I Hypertrophies
of Clitoris
of Nymphae
of Labia Majora

II Lipoma

III Fibroma

IV Cystoma
Modes of development — Contents
Symptoms — Treatment

V Condyloma

VI Carcinoma
Forms — Symptoms — Treatment

VII Urethral Carunculs
Seat — Pathological Anatomy
Symptoms — Diagnosis
Treatment
Palliative — Curative
Ligature — Excision
Actual cautery

Vesico Vaginal Fistula

Varieties — Causes — Complications
Symptoms — Diagnosis
Escape of Urine

History
Local Examination
1. By Fingers
2. By Catheter or Sound
3. With Speculum
4. Injections into Bladder

Prognosis
Treatment
1 Palliative 2 Radical

History of Operative Measures
Ligatures Plugs & catheter
Clamps Metallic sutures

Strength of Wire
- Lead Wire 1 lb
- Silver Wire 9 lb
- Platinum Wire 13 lb
- Iron Wire 26 lb

Preliminary Treatment
Operation
1 Position of Patient
2 Use of Chloroform
3 Exposure of Fistula
4 Paring the edges
5 Introduction of Stitches
6 Securing the Stitches

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Neoplasms of Vagina

I Fibroma

Of uterine origin most frequently or from cervix, but may spring from Vaginal Wall & may be Pedunculated a Sessile. Can may have Fibroma growing from submucous areolar tissue. Symptoms are from bulk of tumour & leucorrhoea & patient thanks it Prolapsus.

Treatment:- Ablation by Ecraseur Galvano Caustic Wire. If broad base dissect it out. No marked tendency to recur

II Cystoma:-

From closure of follicles forming a cyst. They may project in cavity. Contents Watery - clear, or viscid or chocolate colour. In any part of Vagina

Symptoms - If one marked Mechanical disturbance Leucorrhoea Abdominal projection

Treatment - Evacuate by free opening. Cauterising not so efficient

III Sarcoma - Intermediate between Fibroma & Carcinoma. May be distinct or diffused in Walls. Often recur in Vagina after removal of Sarcoma Uteri as if engrafted by it. Soft tumours. Marked leucorrhoea

Treatment :- Removal

IV Carcinoma.

May start from Uterus or Cervix to Vaginal Walls, or occasionally it may have its primary development in Vagina affecting both the Ant. & Post. Wall, or only one part & forming a large spreading tumour.

Course :- Surface ulcerates, breaks down, discharge & hemorrhage. By & by there is swelling of Inguinal Glands. Discharge foetid Must make a Vaginal Examination

Treatment :- Generally only Palliative to prevent discharge & keep up general health & put us if of Cervix Surgical interference not to be dreamed of generally

Neoplasms of Vulva

I Hypertrophies

1. Of Labia. Seldom to be interfered with unnecessary to remove it for mortification. 2 Of Hymen - natural an Obstacle. If tendency to bleeding & of large size - cut off.

3 Labia Majora liable to Elephantiasis, remove as if of scrotum. Effects from difficult Labour causing congestion & permanent hypertrophy.

II Lipoma

Causes great discomfort, its fatty swelling

Diagnosis :- Is easy. Dont confound it with Cystoma

or Hernial swelling. May use an

exploring needle. Hernia swells on coughing.

Lipoma has no neck as a rule has

Treatment :- Remove it but be cautious of

the neck of vessels

III Fibroma

Tends to become pedunculate. Excise pate

IV Cystoma

In smaller lips from distension of occluded

follicles or in larger lips. May be from occlusion

& distension of Bartholinian Glands & not at all

uncommon

Treatment :- Excavate. If of Bartholinian Gland

cauterise or excise it but easier

to open & cauterise its interior

V Enchyloma :- Is not uncommon. Usual treatment.

VI Carcinoma

Comparatively frequent, as it is always at

sites of transition of epithelial structures. At all

parts Vestibule, Fauces & Pharynx, Labia Majora

but at surface of Urethra. Spreads like Epithel

Cancer of Lips. If not interfered with goes on

primary, invades Inguinal Glands. Breaks down
Sps exists & may cause death
Treatment :- Extirpate. By knife cautery, by
which you can burn out parts you
could not cut out thoroughly eradicate it if you
can & as early as possible. Almost always occurs
on external fundenda though sometimes not for
a length of time

VII Urethral Carcinoma.

Disease or Removal of Urethra. Consists of
connective tissue, with disease arrangement like in
Thyroids. Sometimes many nerves.
Seat :- May be at orifice or within canal
or scattered about Labia Mucosa & Thapsia
Size :- Varies from Millet seed to goose egg
Cause :- Don't know. In elder women. In
cases of Prolapsus of Bladder. In young girls
& unmarried & married women. Very painful as
a rule, but may be not
Symptoms :- Pain cannot tell why or where (patient)
Pain intense on Micturition hence patient
retains urine long, or after micturition, or on walking
or on exercise. Pain may be referred to some
distant part of the body as in the head. Blood &
again Hemorrhage.

Diagnosis :- Examination. See vascular, red body. On touching it with sound Patient shrinks from pain. Pass sound along Urethra

Prognosis :- On whole favourable but apt to recur after removal.

Treatment :- Palliative as according to the Stomach before & after menstruation. Ag NO_3 often relieves pain on Menstruation.

Ligature better than using knife or scissors on account of bleeding. If you use knife be sure to thoroughly cauterize the part after operating. Or use actual Cautery alone.

Vesico-Vaginal Fistula

Varieties :- After tedious Labours. Or from accidental injury during birth of child as from Forceps, or broken edges of Cranium or sometimes by penetrating bladder in mistake for uterine membranes. Or may opened in cases of Calculi &c by Surgeon.

Fistula may run between Bladder & Uterus at back of Os Internum generally, or from Pelvic Cellular &c then urine escapes now & again from Genital Canal.

May be high up in Cervix, or low or about

Anatomy of Canal
Fistula may be between Urethra & Bladder
or between Ureter & Bladder
Opening may be very large or very fine
Opening may be oblique & there may be only
little escape of urine.
May be sloughing away of whole wall of Vagina
Opening varies in shape size & direction. May
be one or more openings & if close one urine
still escapes, like close the other opening.
Complications:- Contraction of Vagina
Recto Vaginal Fistula & escape
of faeces also
Contraction of Vagina & Fistula complicated with closure of Urethra, & must make a fresh Urethra before you can close Fistula

Lecture 17 March 22nd 1878
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Symptoms & Diagnosis:- Escape of Urine. Bad history of Urinary Organs.
Commencement of Urine may be from first or not till a week or so after labour.
Cannot say a fistula present without local examination. Feel local contraction, then the

orifice itself which may very large or small. but certain on passing sound through it into Bladder. Generally necessary to introduce fingers forefinger & can then see orifice at which urine exudes; pass a sound through it & meet a catheter in the bladder with it. Sometimes you fail to detect orifice & it is then generally very small & oblique & not constant escape of urine, but inject bladder full with coloured milk & then you can see it escape. If orifice in neck of Uterus it trickles out of Cervix & then you must dilate Cervix as with sponge tent

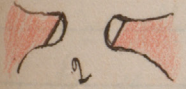
Prognosis:- Depends on seat & size & complications present. If plenty of tissue may undertake cure, but if little tissue uncertain, it cannot cure, but are few of these incurable cases

Treatment:- Operation can generally succeed. Some delicate patient prone, in knee & elbows. Has been for four hours so & without Anaesthetic. Sufficient if she lie on her side but in many cases lithotomy position is best through Anus. If all apt to fall forwards. But you can so Chloroform & she should be for it

is a delicate & painful operation.
Introduce speculum to expose part
If V agina contracted must divide bands previously some dilate. Best best to cut them when operating & you get full expansion, & it dont bleed much.
Must get a good raw surface. Some operators dreaded to pare away much tissue lest if operation fail, they dreaded patient being left worse than before.
Surfaces obtained in different methods. Simons cut off a strip in margin of fistula as in marginal cut 1. Sticks out through into the V agina & Bladder.

1.

Sims bevelled off the margins to a large extent, as in 2


2

Another mode is by splitting up the septum all round the orifice & then the surfaces can be brought together without any loss of tissue & this is done as in diagram 3.

3

Raw surface must be wide & no mucous surface left at any point
How to bring edges together? Silver wire, silkworm gut & horse hair sutures. Iron & silver

wire sutures are the best. The iron sutures are stronger & cheaper, but silver are more malleable & easier removed. Horse hair stitches are very good.

To introduce stitches:- Once first passed a silk thread, tied the wire to end of it & drew it into place. Best to introduce wire by means of the tubular needle which is fixed on a handle.

Some introduce a catheter as Sims did, but not necessary

After treatment:- To keep patient quiet in bed. To keep bowels free. Diet nutritious. Sutures if required

On perfect adherence of margins of wound you may remove the stitches generally in about 10 days. Do it carefully so as not to injure the parts

Lecture 18 March 2 1878

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Requisites of a good stump

1. That the bone be well covered with soft parts
2. That the bone shall not be adherent to, nor bear directly on the cicatrix.
3. That the nerves be so cut as not to be involved in the cicatrix or attached to the bone
4. That the nerves be so deeply covered as to obviate the bad effects produced on their cut extremities by pressure or atmospheric changes

The method by which such a stump can be formed may in general terms be stated to be:- By 2 flaps of unequal length. The larger flaps should contain a moderate amount of muscle where it corresponds to the end of the bone & should be cut from such a position that it falls over the end of the bone As a general rule:- the long flaps should not contain the larger vessels & nerves, but in the leg where the skin integuments do not form a good covering the long posterior flaps is preferable & as the vessels & nerves are cut high up there is less objection - Owing to the inequality of the flaps the cicatrix is drawn aside

Osteoma
Enchondroma
Adenomata
Angioma
Total manifestations of simple tumours
to to to to to

Syphilis

8. Diseases of the Generative Organs—

Pruritus, Oedema,

Leucorrhœa, Hydrorrhœa,

Inflammation,

Endometritis,

Polypoidal and diffuse forms,

Mesometritis,

Perimetritis,

Fibroid Tumours,

Carcinoma,

Displacements of Uterus—

Prolapsus

complete and partial,

Anteversion.

3. The Placenta—

Myxoma,

Cystic Growths,

Apoplexies,

Inflammation,

Calcareous degeneration

4. The Umbilical Cord—

Convolution,

Knots, Torsion.

B. Intra-uterine Diseases of Fœtus.

Rickets, Struma, Syphilis

Zymotic diseases, Cancer,

Tumours, Inflammation.

INTERRUPTED GESTATION.

Abortion and Premature Labour.

Definition.

Causes—*a.* Fœtal,

b. Maternal—local and general.

Symptoms,

Diagnosis,

Prognosis,

Treatment (*a*) when Abortion threatens,

(*b*) when Abortion certain.

After treatment.

DIFFICULTY OF HUMAN PARTURITION.

Alleged Sufficiency of Nature in all Cases of Human Parturition.

Evidence of Facility in the Lower Animals.

Comparative Anatomy of the Pelvis.

Principal Causes of Difficulty in Human Parturition from Pelvic and other Peculiarities required for the Erect Posture.

Proofs of its greater Facility and Safety in Black Races.

Proposed Explanations.

DIFFICULTY OF HUMAN PARTURITION.

Alleged Sufficiency of Nature in all Cases of Human Parturition.

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Proofs of its greater Facility and Safety in Black Races.

Proposed Explanations.

SECOND STAGE—Rules as to its management.

Duties of Accoucheur after the Child is born.

THIRD STAGE—Two extremes of Practice, Active and Expectant.

Rules as to its management.

Subsequent duties of Medical Attendant.

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ANÆSTHESIA IN MIDWIFERY.

History.

Objections to its Employment.

Varieties of Anæsthetics.

Dangers; Precautions.

Rules for the Exhibition of Chloroform in Parturition.

42

Influence of Abnormal Pelves on

1. Presentation and Position,
2. Mechanism of Labour,
3. Progress of Labour,
4. Life of mother and child.

Diagnosis of Pelvic Abnormalities.

Pelvimetry.

Operations required in various degrees of Pelvic contraction.

III. Faults in *Child*—

1. Shortness of Umbilical Cord.
2. Death of the child.
3. General large size of the child.
   Larger size of head in male, than female.
4. Strong ossification of head.
5. Enlargement of head or body from disease:
   Hydrocephalus, Hydrorachitis, Hydrothorax,
   Ascites, Hydronephrosis, Tumours.
   General principles of treatment.

6. Malposition of the head.
   Occipito-posterior cases.
   Causes of delay.
   Management.

7. Malpresentation of the head.
   (1.) Parietal, (2.) Occipital, (3.) Frontal,

   (4.) Face presentations.
   Nature and frequency,
   Causes,
   Positions: frequency and nomenclature.
   Mechanism:
   1. Extension, 2. Internal Rotation,
   3. Flexion, 4. External Rotation.
   Diagnosis.
   Prognosis.
   Causes of delay.
   Management.
   (5.) Head presentations complicated by malposition of the arm.

General Rules for treatment of cases of Malposition and Malpresentation of the head.

6. Malposition of the head.
   Occipito-posterior cases.
   Causes of delay.
   Management.

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